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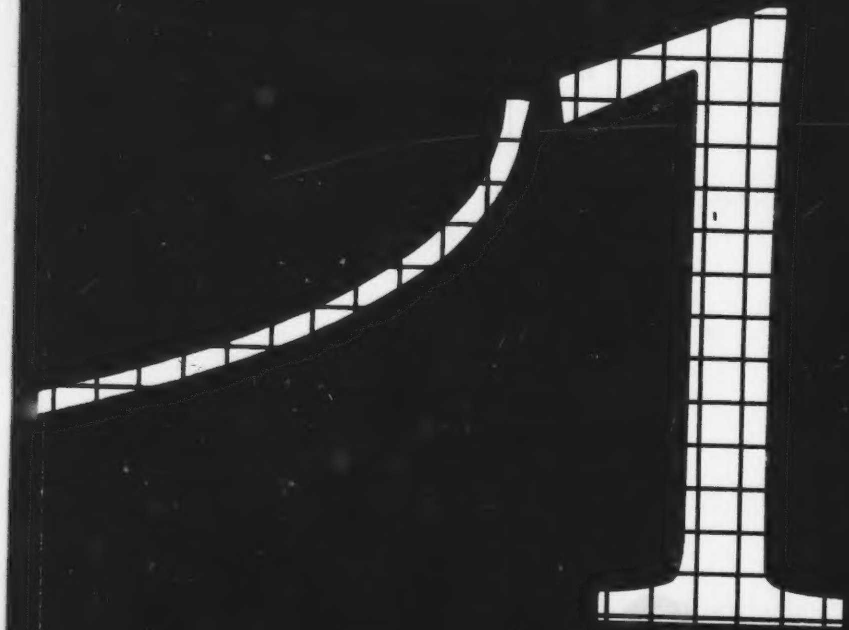
NATIONAL CENTER FOR EDUCATION STATISTICS

Volume 1

Elementary and Secondary Education



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Highlights

In a recent nationwide assessment, over 80 percent of 11th graders could interpret scientific data and make inferences about outcomes of experimental procedures. However, only 8 percent could draw conclusions using knowledge from the physical sciences and could apply the principles of genetics (*Indicator 1:4*).

In an international assessment of performance in science and mathematics in six countries, the 13-year-old students in the United States were in the lowest performing group in both areas. In both science and mathematics, performance of U.S. students was significantly below that of students in Korea, Spain, and the United Kingdom (*Indicators 1:3* and *1:5*).

In 1987, significantly more high school graduates of all racial/ethnic groups earned four credits of English and three credits in social studies, mathematics, and science than in 1982 (*Indicator 1:8*).

Nationally, about one out of every four 18- and 19-year-olds has not completed high school (*Indicator 1:9*).

Those who are 20–24 years old who do not complete high school have significantly higher rates of unemployment than those in the same age group who have completed high school. White and Hispanic dropouts have lower unemployment rates than black high school graduates (*Indicator 1:12*).

The purchasing power of teachers' salaries was the highest in 30 years (*Indicator 1:17*).

Enrollment in public elementary schools began to increase in 1985 and is projected to continue rising through 1997. Enrollments, however, are not expected to reach the record highs attained in the 1970s (*Indicator 1:21*).

Between 1976 and 1986, minority enrollment in public schools increased from 24 percent to 30 percent (*Indicator 1:22*).

Cocaine use among high school seniors dropped significantly in 1988, for the second consecutive year. At the same time, alcohol use remained high, despite declines since 1979. In 1988, about two of every three seniors reported using alcohol in the month preceding the survey (*Indicator 1:25*).

THE CONDITION OF EDUCATION
1989

Volume 1

Elementary and Secondary Education

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National Center for Education Statistics

"The purpose of the Center shall be to collect, and analyze, and disseminate statistics and other data related to education in the United States and in other nations."—Section 406(b) of the General Education Provisions Act, as amended (20 U.S.C. 1221e–1).

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Commissioner's Statement

The National Center for Education Statistics (NCES) gathers and publishes information on the status and progress of education in the United States. The Federal authorization (enacted in 1974 but with antecedents to 1867) for these activities states that the Center will "collect, collate, and from time to time, report full and complete statistics on the condition of education in the United States" (section 406 (b) (1) of the General Education Provisions Act). This legislation mandated an annual statistical report from the Secretary of Education on the subject. In 1988, the Hawkins-Stafford Elementary/Secondary School Improvement Amendments (Public Law 100-297, amending section 406 (d)(1)(C) of the General Education Provisions Act) changed that reporting responsibility to be that of the Commissioner of Education Statistics.

This year, as in 1988, the "indicators"—key data that measure the health of education, monitor important developments, and show trends in major aspects of education—are published in three volumes. *The Condition of Education* report encompasses the first two volumes, the first addressing elementary and secondary education and the second, postsecondary education. The third volume, *1989 Education Indicators*, includes the text, tables, and graphs from the first two volumes, plus the technical supporting data, supplemental information, and data sources.

NCES began presenting statistical information as education indicators with the 1986 edition of *The Condition of Education.*[1] Since then, the indicators have been developed through studies carried out by the Center as well as from surveys conducted elsewhere, both within and outside the Federal Government. Although indicators may be simple statistics, more often they are analyses—examining relationships; showing changes over time; comparing or contrasting subpopulations, regions, or States; or studying characteristics of students from different backgrounds. Data used for these indicators are the most valid and representative education statistics available in America today for the subjects and issues with which they deal.

Not all possible indicators are published in a given edition. No more than a total of 40-50 indicators is presented in each year's report. By contrast, the Center's other major annual compendium, the *Digest of Education Statistics*, includes more than 300 statistical tables, plus figures and appendices. The indicators, therefore, represent a consensus of professional judgment on the most significant national measures of the condition and progress of education at this time, but tempered, necessarily, by the availability of current and valid information. The indicators reflect a basic core that can be repeated with updated information every year and supplemented by a more limited set of indicators based on infrequent or one-time studies.

Those indicators in the elementary and secondary education volume derive more from comprehensive data collected over time, while those in the postsecondary volume are based on more recently developed data, reflecting a narrower array of topics described by currently available timetrends and nationally representative statistics.

For elementary and secondary education, new indicators include:

- a science indicator from the most recently completed analysis of the National Assessment of Educational Progress;
- indicators on international comparisons of mathematics and science proficiency;
- an indicator on the racial and ethnic composition of elementary/secondary education, based on data from the Office for Civil Rights; and
- an indicator on the number of credits required by States for graduation from high school from new data of the Council of Chief State School Officers.

The expanded set of postsecondary indicators presented in 1988 is continued this year with selected additions. Indicators have been added on degrees awarded by colleges and universities according to the fields of study and gender of students. The National Science Foundation has provided new data on research and development spending by universities and trends in new doctorate recipients' entering university employment.

The concept of education indicators has gained the attention of the U.S. Congress, national organizations, States, and localities. To assist the Center in conceptualizing and developing a set of education indicators most useful to policymakers and researchers, Congress recently mandated that NCES convene a special study panel of experts to "make recommendations concerning the determination of education indicators for study and report" (P.L. 100-297). The Commissioner is to submit the report of the panel to Congress upon completion of its work. NCES expects to revise *The Condition of Education* to reflect those recommendations. The panel will meet over the coming year. Its conclusions, however, will not greatly influence the 1990 edition of *The Condition of Education*, but its work could result in major changes beginning in 1991.

In developing indicators, the Center has participated in a widening national discussion about the types of measures that are useful in monitoring the progress of education. A number of local education agencies and States, such as California and Connecticut, are monitoring their reform agendas through education indicators. At the national level, the Council of Chief State School Officers seeks to have consistent reporting by the States on a number of indicators that it has identified.

In future editions, the utility of this report should increase as more diverse, high quality data become available, especially as new time series can be constructed. Elementary and secondary education data will be enhanced by revisions in the basic data collected about public schools in the Common Core of Data survey and by the results from the Schools and Staffing Survey (SASS), which covers both public and private schools. Some data from the first SASS are expected to be analyzed in time for the 1990 edition.

Data collection from more postsecondary institutions than the traditional, accredited 2- and 4-year colleges and universities has already begun. This expanded system, called the Integrated Postsecondary Education Data System (IPEDS), also includes information from nonaccredited institutions whether they are public or private, 4-year, 2-year, or less-than-2-year. Information from this broader group of institutions will provide a much clearer picture of what is happening in the full scope of postsecondary education.

Finally, the format of *The Condition of Education* is designed to present statistical information in an accessible manner for a general audience. As in the 1988 edition, the one-page narrative style is followed by an illustrative chart. The tables supporting each narrative and chart are placed in an appendix.

I hope you find the material helpful and invite you to send us comments on how to make future editions even more useful.

Emerson J. Elliott
Acting Commissioner of
Education Statistics

Acknowledgments

The Condition of Education was prepared in the National Center for Education Statistics (NCES), Office of Educational Research and Improvement (OERI), by the Indicators and Multilevel Studies Branch of the Crosscutting Education Statistics and Analysis Division under the general supervision of Jeanne E. Griffith, Acting Division Director.

Curtis O. Baker, Acting Chief of the Indicators and Multilevel Studies Branch, coordinated the development and production of this edition after taking over from Carlyle Maw, who is now in the NCES Office of the Chief Statistician. Laurence Ogle, Gayle Rogers, and Mark Schwartz of the branch contributed indicators, both new and updated. Mary Frase was consulted for technical guidance and provided a challenge to improve the readability of the indicators. Brenda Wade helped type the manuscript and assemble the final document.

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Overview

Introduction

Since the early 1980s, the country has become increasingly aware of the range of critical issues facing its schools. These issues are nationwide and include problems of declining academic performance, concerns about teacher qualifications and availability, and use of drugs and violence in the schools. The issues have serious implications, not only for effective operation of the schools, but for the future of individual workers, U.S. economic competitiveness, and ultimately for the structure and cohesiveness of American society.

The Nation has responded to this situation by renewing its commitment to excellence in education. The thrust of this commitment constitutes a major reform movement, involving government at all levels, school officials and teachers, institutions of higher education, as well as interested parents and citizens. Reforms include expanded academic programs for students, improved safety programs for the schools, increased requirements for high school graduation, and new approaches to attract better qualified individuals to the teaching profession.

The indicators presented in this volume touch on many issues in elementary and secondary education. They are discussed below under five major headings: (1) school population and support; (2) the teaching profession; (3) school environment; (4) student academic performance; and (5) transitions.

School Population and Support

Changes in the size and characteristics of the school population create a context for demands that will be placed on educational institutions. While private school enrollment has changed little during the 1980s (*Indicator 1:20*), enrollment in the public schools has begun to rise slightly at the elementary level after declines in the 1970s. Secondary enrollment is expected to decline somewhat until about 1990 and then begin to increase again. However, neither level of enrollment is expected to reach the levels of the early 1970s before the end of the 1990s (*Indicator 1:21*). The proportion of minority students in the public schools rose to almost 30 percent in 1986, up from 24 percent in 1976 (*Indicator 1:22*). At the same time that minority enrollment has increased, special education enrollment has also increased (*Indicator 1:23*).

While total enrollment has been stable or declining, the balance among sources of financial support for public schools has been changing. Until 1979, local jurisdictions provided the largest share of funds to operate public schools. Since 1979, States have provided the most funds, reaching 50 percent in 1987. Federal funds that accounted for almost 10 percent of this support in 1980 declined to 6 percent by 1987 (*Indicator 1:13*).

The total level of effort (including Federal, State, and local) to provide resources for public schools—a measure linking revenues per pupil to per capita income—has shown a long-term increase, although it has leveled off recently. The index of this effort increased by more than 70 percent from 1950 to 1986 and has remained at the same level since then (*Indicator 1:15*). This increasing effort to pay for education has contributed to a continuing increase in current expenditure per pupil, which reached $3,977 in 1986–87 (*Indicator 1:14*). Closely associated with the increasing per pupil expenditure has been a reduction in the ratio of pupils per teacher. Since 1959–60, pupil/teacher ratios have declined by 32 percent at the elementary school level and 29 percent at the secondary level (*Indicator 1:18*).

The Teaching Profession

Teachers are vital to an educational system. However, since 1959–60, the proportion of classroom teachers has declined from 65 percent to 53 percent of the total staff (*Indicator 1:16*). There is an expected demand for increasing numbers of new secondary school teachers through 1995 (*Indicator 1:19*). At the same time, States are imposing greater requirements of the teachers who may be hired by local school districts. As of 1988, 46 States require prospective teachers to pass some form of test prior to certification, and many States require a test at more than one of the following points: admission to teacher education, exit from teacher education, or just prior to initial certification (*Indicator 1:30*). Increasing teacher salaries may improve recruiting efforts. Teacher salaries are now 76 percent higher than they were in 1980, in current dollar terms. In constant dollars, in 1988, they exceeded the previous high average that was in 1973 (*Indicator 1:17*).

School Environment

Adequate resources and good teachers are essential to good schools, but they are not sufficient. A safe, undisturbed setting with students in it who are ready to learn is also necessary. Students in schools with numerous problems (such as student absenteeism, high teacher turnover, low standards for students, and vandalism) had lower reading scores than students in schools with fewer problems (*Indicator 1:26*). Disruptive behavior, one of the factors that can hinder learning, has increased over the past 5 years, according to teachers (*Indicator 1:24*), while drug and alcohol use has declined in recent years (*Indicator 1:25*). Teachers have identified two factors, outside of the schools' control, as major causes of students' difficulties in school: children's being left on their own after school and family poverty (*Indicator 1:28*). Despite the apparent concern about the school environment, the public's ratings of the public schools have not changed significantly in recent years (*Indicator 1:27*).

Student Academic Performance

The academic performance of students, as measured by standardized tests, shows that students cannot perform many ordinary tasks. Only a small portion of 17-year-olds perform at the highest proficiency levels. Where trend data are available, overall performance of U.S. students is not changing significantly. In fact, in comparison to students in other countries, U.S. students' performance is significantly lower in mathematics and science than that of students in most of the other countries tested (*Indicators 1:3* and *1:5*). While the gap between white and black and Hispanic student performance has been reduced, it remains significant. In the most fundamental area, reading, few students even in the 11th grade can defend their judgments and interpretations about what they read (*Indicator 1:1*). Similar deficiencies show up in mathematics and science, where performance has been low for more than 10 years and has improved very little (*Indicator 1:2* and *1:4*). In the areas of U.S. history and literature, results are mixed. While students are familiar with early American history and the Bible, they show little familiarity with either recent U.S. history or literature (*Indicator 1:6*).

Scores on the ACT and SAT have remained low, but appear to have stopped declining since the early 1980s (*Indicator 1:10*). Students from private schools, especially nonsectarian ones, outperform those from public schools (*Indicator 1:11*).

The proportion of high school graduates completing the amount of "new basics" recommended by the National Commission on Excellence in Education in 1983 increased from 13 percent to almost 30 percent between 1982 and 1987 (*Indicator 1:8*). Only in requiring 4 years of English do more than 50 percent of the States require as many credits for graduation as recommended by the National Commission on Excellence in Education. However, a total of 19 States now require the passing of a competency test for a high school diploma (*Indicator 1:29*).

Transitions

The percentage of 18- and 19-year-olds who have completed high school seems to have stabilized at around 75 percent (*Indicator 1:9*). The attainment of a high school diploma still has a positive economic impact. Unemployment rates for high school graduates (aged 20–24) are significantly lower than for high school dropouts. However, the unemployment rate for black high school graduates in this age group (20–24) continues to exceed that of white and Hispanic dropouts (*Indicator 1:12*).

Conclusion

The school systems throughout the Nation face the formidable challenges of improving students' performance and coping with the changing social and economic environment. Current student performance may be insufficient to meet the demands that will be placed on them as they move to higher levels of schooling or into the workplace. Performance levels are changing very slowly despite increases in graduation requirements, relatively stable enrollments, substantial increases in teacher salaries, and the continued willingness of the public to support its schools.

The social and economic settings also confront schools with considerable problems. Poverty of students' families and drug and alcohol abuse continue to plague schools, but are outside of schools' abilities to control. In the near future, enrollment increases will raise the overall demand for new secondary teachers. The student body will become increasingly minority, and a substantial portion of that student body will not be native English-speaking.

Recent educational reforms have been instituted in response to some of these problems. The impact of these changes does not yet appear in national data. Taken together, these indicators point to the 1990s as a time of major testing for schools as demands intensify for a better educated work force that will enable U.S. industry to face increasing competition from abroad.

Indicators of Elementary and Secondary Education

A. Outcomes

A. Outcomes: Student Performance

Indicator 1:1 Reading performance in grades 3, 7, and 11

- **Average reading proficiency continues to be lower for black and Hispanic students than for white students at all grade levels assessed.**
- **Students at all grade levels had particular difficulty with tasks that required them to elaborate upon or defend their judgments and interpretations about what they had read.**

Reading skills are considered basic to the education process. So when some students lag in their reading achievement, they may find it hard to participate effectively in an economy requiring increasingly sophisticated job skills.

The National Assessment for Educational Progress (NAEP) * in 1986 tested the reading performance of various groups in grades 3, 7, and 11 of public and private schools and found it to be uneven. Specifically, black and Hispanic students performed at levels below those of white students. NAEP also found that 11th graders in an academic curriculum had higher reading scores than those in general or vocational programs, and that black and Hispanic students were less likely to be in academic programs than white students.

The study also assessed students'ability to read, think, and write. Results indicated that while the Nation's students had the skills to derive a surface understanding of what they had read, they had difficulty when asked to defend or elaborate upon this surface understanding. NAEP evaluated responses according to their complexity. For example, about 80 percent of the third graders wrote "inadequate" or "minimal" responses to a story task, and only 18 percent produced a "satisfactory" response. Although the 11th graders performed with greater success, 36 percent wrote "inadequate" or "minimal" responses, and 22 percent wrote "elaborated" responses.

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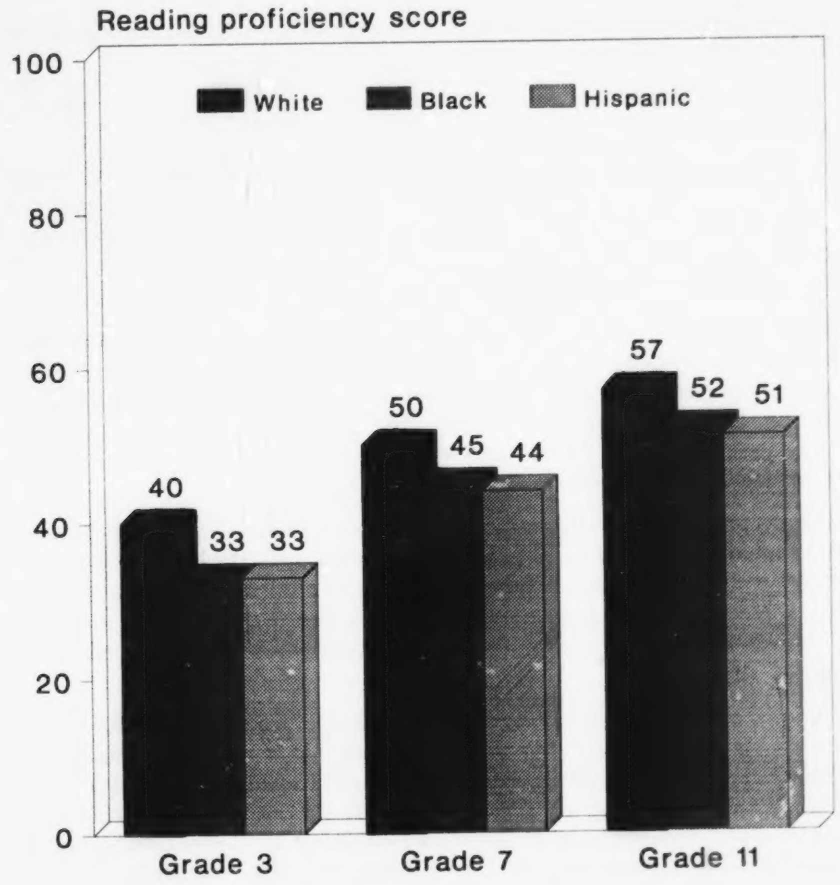
* NAEP is a congressionally mandated project that has assessed reading achievement five times, most recently in the 1985-86 school year. Because some new procedures were introduced in the 1985-86 assessment, the 1985-86 results were not comparable to those of earlier assessments. Therefore, trend information is not available. With the 1988 assessment, adjustments will be made to the 1985-86 data to allow for comparisons with previous NAEP reading tests.

SOURCE: National Assessment of Educational Progress, *Who Reads Best? Factors Related to Reading Achievement in Grades 3, 7, and 11*, 1988.

Chart 1:1 **Average reading proficiency, by race and ethnicity: 1986**



NOTE: The range of the reading proficiency scale was from 0 to 100. The average scores by grade were 38.1 for grade 3, 48.9 for grade 7, and 56.1 for grade 11.

SOURCE: National Assessment of Educational Progress, 1988.

Indicator 1:2 Trends in mathematics performance of 9-, 13-, and 17-year-olds

- **In 1986, mathematics proficiency of 17-year-olds was no higher than in 1973, but was slightly higher than in 1982.**
- **Between 1978 and 1986, 9- and 13-year-olds improved their mathematics performance slightly.**
- **While mathematics performance has improved, it remains low. Improvements occurred at the lower levels of the mathematics proficiency scale: even at age 17, 49 percent of students were unable to perform moderately complex procedures.**

Poor performance in mathemathics has been a national concern since the late 1960s, when the National Assessment of Educational Progress (NAEP) began periodically assessing students' knowledge, skills, and attitudes. During a time when science and technology—which depend on mathematics—have played an increasingly important role in the Nation's economy and national security, mathematics scores have remained low.

Results from the 1986 NAEP Mathematics Assessment show a slight upturn in the mathematics performance of 17-year-olds compared to 1982.* Between 1978 and 1986, some improvement occurred among 9- and 13-year-olds. At all three ages, the improvements occurred in lower-level skills involving routine computations and measurement problems but not in more complex procedures and analytical problem solving.

Average mathematics achievement remains low for all three age groups. Over 25 percent of 13-year-olds and 4 percent of 17-year-olds were unable to perform at the 250 level of the mathematics scale that involves the four basic operations (addition, subtraction, multiplication, and division), one-step problem solving, and comparing information from graphs and charts. Only 6 percent of 17-year-olds scored at the level involving multistep problem solving and algebra (350 scale level).

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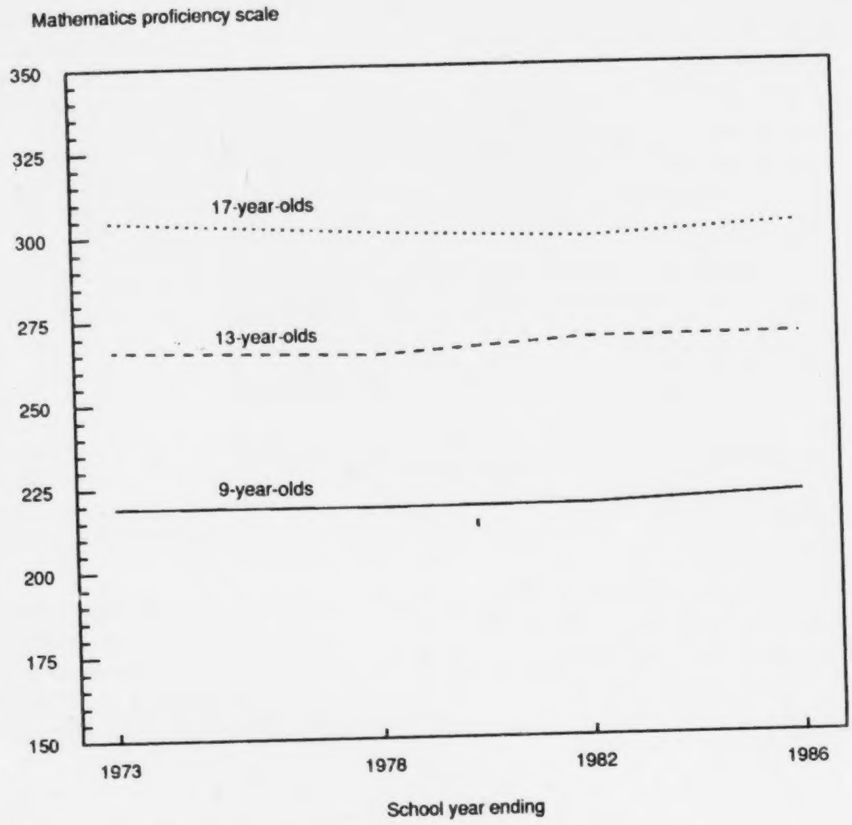
* NAEP has assessed mathematics achievement four times—in 1973, 1978, 1982, and 1986.

SOURCE: National Assessment of Educational Progress, *The Mathematics Report Card: Are We Measuring Up?*, 1988.

Chart 1:2 Trends in average mathematics proficiency



NOTE: Mathematics Proficiency Scale
Level 150 = Simple arithmetic facts
Level 200 = Beginning skills and understanding
Level 250 = Basic operations and beginning problem solving
Level 300 = Moderately complex procedures and reasoning
Level 350 = Multistep problem solving and algebra.

SOURCE: National Assessment of Educational Progress, *The Mathematics Report Card: Are We Measuring Up?*, 1988.

A. Outcomes: Student Performance

Indicator 1:3 International comparisons of mathematics performance

- **In the first International Assessment of Educational Progress, 13-year-olds from the United States scored in the lowest group in mathematics proficiency.**

The mathematics abilities of students are important indicators of the results of schooling. In an increasingly technological world, mathematics skills of a nation's workers may be a crucial element of competitiveness. Workers with better mathematics skills may well be more productive workers.

In the first International Assessment of Educational Progress, 13-year-olds from the United States and 5 other countries (Canada, Ireland, Korea, the United Kingdom, and Spain) were assessed in a standardized fashion in mathematics proficiency. In mathematics, the results found four groups of students significantly different from one another. Students in the United States were in the lowest scoring group.

The mathematics proficiency of students in Korea was significantly higher than that of students in any of the other countries. At least one of the seven * different Canadian subgroups (in four provinces) was found in every proficiency group, except the top one. Spain, the United Kingdom, and the Republic of Ireland were in the third highest group.

The assessment was designed to examine abilities of students measured on a scale from 0 to 1000, with a mean of 500. At the 500 level on the scale, students could solve two-step mathematical problems. Students in the United States ranked very low in the percentages of 13-year-olds able to perform at this level. While 78 percent of Korean students could perform at this level, only 40 percent of those in the United States could do so.

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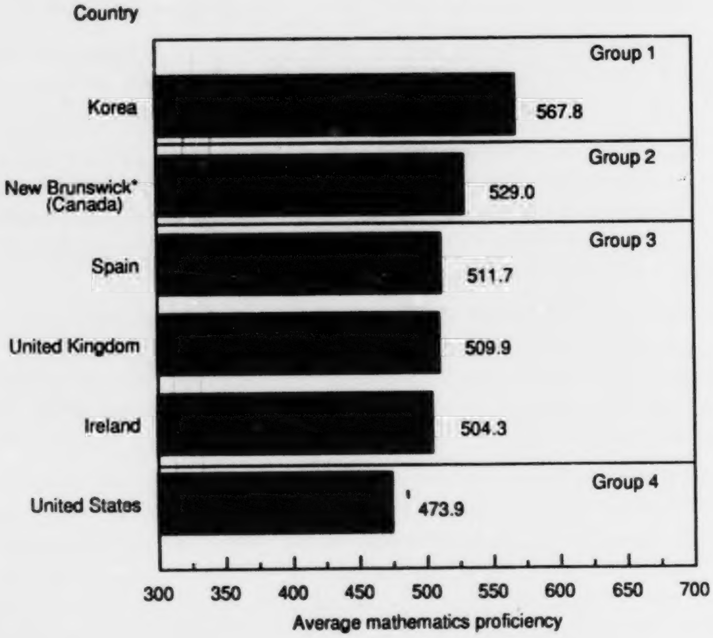
* Four groups were in schools whose language of instruction was English, and three were in schools whose language of instruction was French.

SOURCE: International Assessment of Educational Progress, *A World of Differences, An International Assessment of Mathematics and Science*, 1989.

Chart 1:3 Average mathematics proficiency of 13-year-old students in six countries: 1988



* New Brunswick (English) is the median group of seven groups assessed in four Canadian provinces.

NOTE: Differences in performance among the four groups shown are statistically significant at the 0.05 level; differences within groups are not statistically significant.

Skills characteristic of different levels on the mathematics scale:
Level 300 = Simple addition and subtraction
Level 400 = Basic operations to solve simple problems
Level 500 = Intermediate level skills to solve two-step problems
Level 600 = Measurement and geometry concepts to solve more complex problems
Level 700 = More advanced mathematical concepts.

SOURCE: International Assessment of Educational Progress, *A World of Differences, An International Assessment of Mathematics and Science*, 1989.

Indicator 1:4 Trends in science performance of 9-, 13-, and 17-year-olds

- **Between 1982 and 1986, 17-year-olds slightly improved their science performance.**
- **While science performance scores have risen, they remain low; most students, even at age 17, were unable to perform at the upper levels of the scale.**

Declining test scores in science have been an educational concern since the late 1960s when the National Assessment of Educational Progress (NAEP) began periodically assessing students' knowledge, skills, and attitudes. During this period, students' proficiency in science has remained low. Yet, scientific capability is considered vital to our national defense and economic competitiveness.

Results from the 1986 NAEP Science Assessment show an upturn in the average science performance of 17-year-old students when compared with 1982.* Among 9-year-olds, there was some significant improvement over 1977. In 1986, there was no improvement in performance at the highest level by any age group compared to the 1982 assessment.

Average science achievement scores for all three age groups remain low. The ability to apply scientific information, interpret data, and make inferences about outcomes of experimental procedures was exhibited by 28 percent of 9-year-olds, 53 percent of 13-year-olds, and 81 percent of 17-year-olds. However, only 8 percent of 17-year-olds could integrate specialized scientific information, infer relationships, and draw conclusions using knowledge from the physical sciences and applying principles of genetics.

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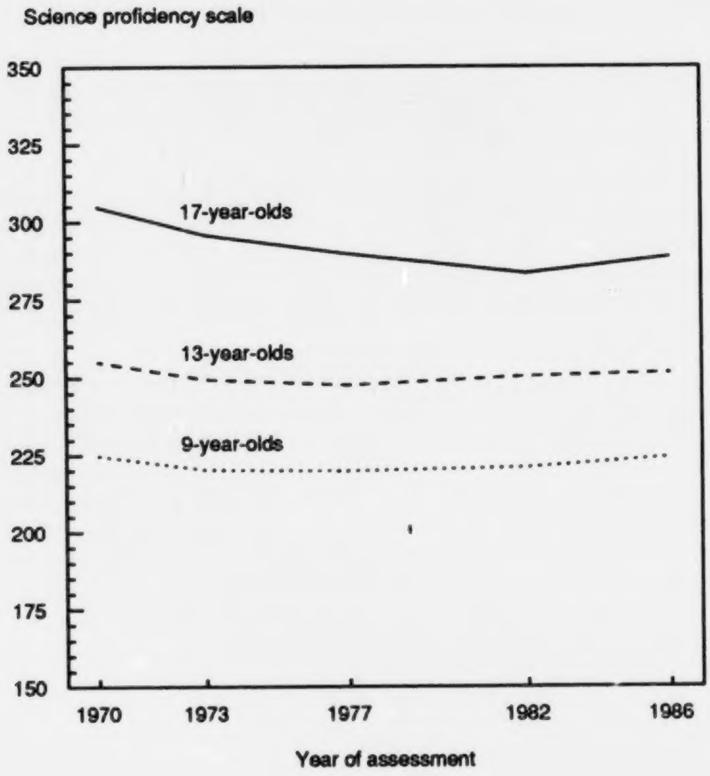
*NAEP has assessed science five times—1970, 1973, 1977, 1982, and 1986. "Results for the 1977, 1982, and 1986 assessments are based on a newly developed trend analysis of the data collected in those years, while the results for the earlier assessments * * * are extrapolated from previous analyses of NAEP data."

SOURCE: National Assessment of Educational Progress, *The Science Report Card, Elements of Risk and Recovery*, 1988.

Chart 1:4 Trends in average science proficiency of 9-, 13-, and 17-year-olds: Selected years 1970–1986



* While 9- and 13-year-olds were assessed in the spring of 1970, 17-year-olds were assessed in the spring of 1969.

NOTE: Science Proficiency Scale
Level 150 = Knows everyday science facts
Level 200 = Understands simple scientific principles
Level 250 = Applies basic scientific information
Level 300 = Analyzes scientific procedures and data
Level 350 = Integrates specialized scientific information.

SOURCE: National Assessment of Educational Progress, *The Science Report Card, Elements of Risk and Recovery*, 1988.

A. Outcomes: Student Performance

Indicator 1:5 International comparisons of science performance

- **The science proficiency of U.S. students was well below the mean on the first International Assessment of Educational Progress.**

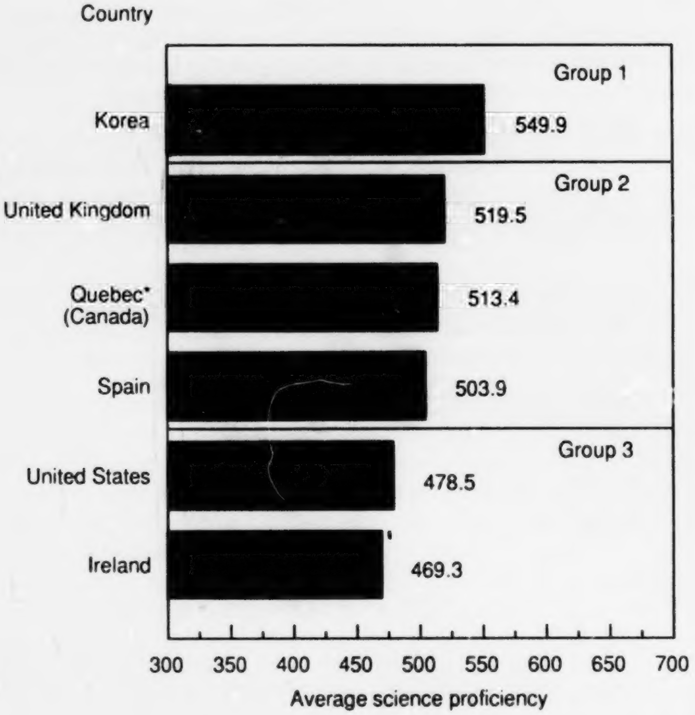
The United States is in an increasingly competitive international economic climate. In such a world, the scientific capabilities of U.S. workers may indicate how competitive the country might be in the future.

In the first International Assessment of Educational Progress, 13-year-olds from the United States and five other countries were assessed in a standardized fashion in science. Average proficiency levels fell into three groups, which were significantly different from one another. Students in the United States were in the lowest scoring group, well below the mean, along with Irish students and two groups of Canadian students.

Students in British Columbia and Korea performed significantly better than students from other countries and provinces. The middle group included students from the United Kingdom, Spain, and four Canadian groups. The assessment was designed to examine abilities of students measured on a scale from 0 to 1000, with a mean of 500. At the 500 level on the scale, students could use scientific procedures and analyze scientific data. Students in the United States ranked very low in the percentages of 13-year-olds able to perform at this level. While 72 percent of British Columbian students and 73 percent of Korean students could perform at this level, only 42 percent of U.S. students could do so. These results parallel the results of the international mathematics proficiency testing (see *Indicator 1:3*)

SOURCE: International Assessment of Educational Progress, *A World of Differences, An International Assessment of Mathematics and Science*, 1989.

Chart 1:5 **Average science proficiency of 13-year-old students in six countries: 1988**



* Quebec (French) is the median group of seven groups assessed in four Canadian provinces.

NOTE: Differences in performance among the three groups are statistically significant at the 0.05 level; differences within groups are not statistically significant.

Skills characteristic of different levels of proficiency on the science scales:

Level 300 = Knows everyday science facts
Level 400 = Understands and applies simple scientific principles
Level 500 = Uses scientific procedures and analyzes scientific data
Level 600 = Understands and applies scientific knowledge and principles
Level 700 = Integrates scientific information and experimental evidence.

SOURCE: International Assessment of Educational Progress, *A World of Differences, An International Assessment of Mathematics and Science*, 1989.

Indicator 1:6 Knowledge of U.S. history and literature

- **In 1986, 80 percent or more of U.S. 11th graders had some knowledge of such aspects of history as pioneers in technology, colonial history, economic history, geography, World War II, slavery, and the Bill of Rights. Less than 30 percent correctly answered questions dealing with the approximate dates of historical events, recent history, and the women's movement.**
- **In literature, 80 percent or more of 11th graders could answer questions involving the Bible, Shakespeare, black literature, children's classics, and well-known American and English literature. Less than 30 percent identified the American and European authors of certain, mostly modern, literary works.**

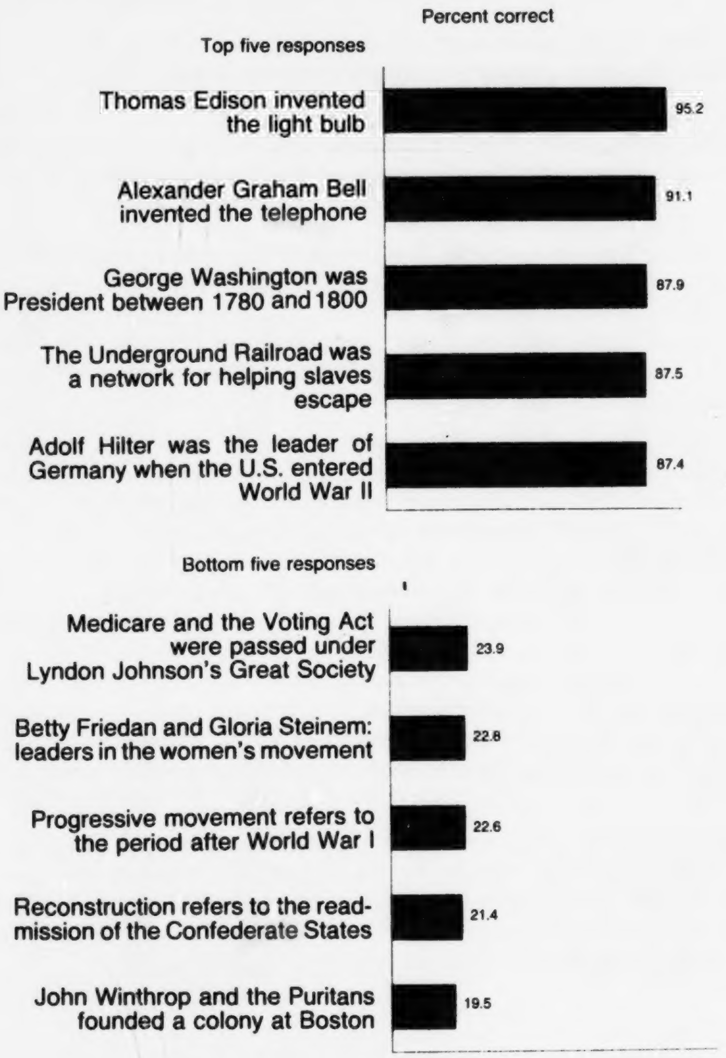
History and literature transmit and enrich our culture and serve as a basis for communication among literate people. The 1986 assessment in literature and U.S. history is the first major survey of students' knowledge of specific factual content.

While no absolute standards exist for judging what all students "should" know, the results on specific items included in the assessment provide a profile of student knowledge. In U.S. history, 19 out of 20 high school juniors knew that Thomas Edison invented the light bulb, that Alexander Graham Bell invented the telephone, and that George Washington was President between 1780 and 1800. However, fewer than one out of four knew when Abraham Lincoln was President or that Reconstruction refers to the readmission of the Confederate States to the Union. In literature, more than 9 out of 10 knew that Noah gathered pairs of creatures onto an ark, that Moses led the people out of Egypt and gave the 10 Commandments, and that Romeo and Juliet's love was hindered by their feuding families. But fewer than one out of four knew that Tennessee Williams wrote *A Street Car Named Desire* or that Alexis de Tocqueville wrote *Democracy in America*.

Students enrolled in an academic program performed significantly better than students in a general program or vocational/technical programs. This may be because students in academic programs spend more time in school studying history and literature; moreover, academic students may be more interested in these subjects or may have more innate ability.

SOURCE: National Assessment of Educational Progress, *Literature and U.S. History: The Instructional Experience and Factual Knowledge of High School Juniors*, 1987.

Chart 1:6 U.S. history item responses: 1986



* Excluding items relating to non-U.S. geography.

SOURCE: National Assessment of Educational Progress, 1988.

Indicator 1:7 Computer competence in grades 3, 7, and 11

- **In a 1985–86 assessment of computer competence, students in each of grades 3, 7, and 11 generally averaged less than 50 percent correct on the test items.**
- **Even students who had used a computer, had studied computers in school, or had one at home generally averaged under 50 percent correct.**

America's prominence in the world economy and its national security have become tied to computer-based technology. In 1983, the National Commission on Excellence in Education in *A Nation at Risk* brought increased attention to computer science instruction by recommending it be required of all high school students as part of the "Five New Basics" along with English, mathematics, science, and social studies.

Recognizing the emerging vital importance of computer skills for employment opportunities and productivity, administrators of the National Assessment of Educational Progress included an examination of computer competence in three grades in 1986. The students' competence was tested in three areas: (a) computer technology, (b) computer applications (e.g., word processing and graphics), and (c) computer programming. Students generally had difficulty answering questions on the assessment. On the average, 3rd graders could only answer about 3 out of 10 items correctly; 7th graders, 4 out of 10; and 11th graders, fewer than 5 out of 10.* Low scores in using applications and in programming seem to be related to the low frequencies of computer use in most classrooms. For example, about two-thirds of students assessed had never written computer programs. It should be noted that these three areas involve various skills that may be emphasized differently at different schools.

Students who had access to or training on computers answered a higher percentage of items correctly. Specifically, the experiences of having ever used a computer, studying computers in school, and having access to a computer at home are positively related to computer competence. Nevertheless, even the performance of advantaged students averaged less than 50 percent correct.

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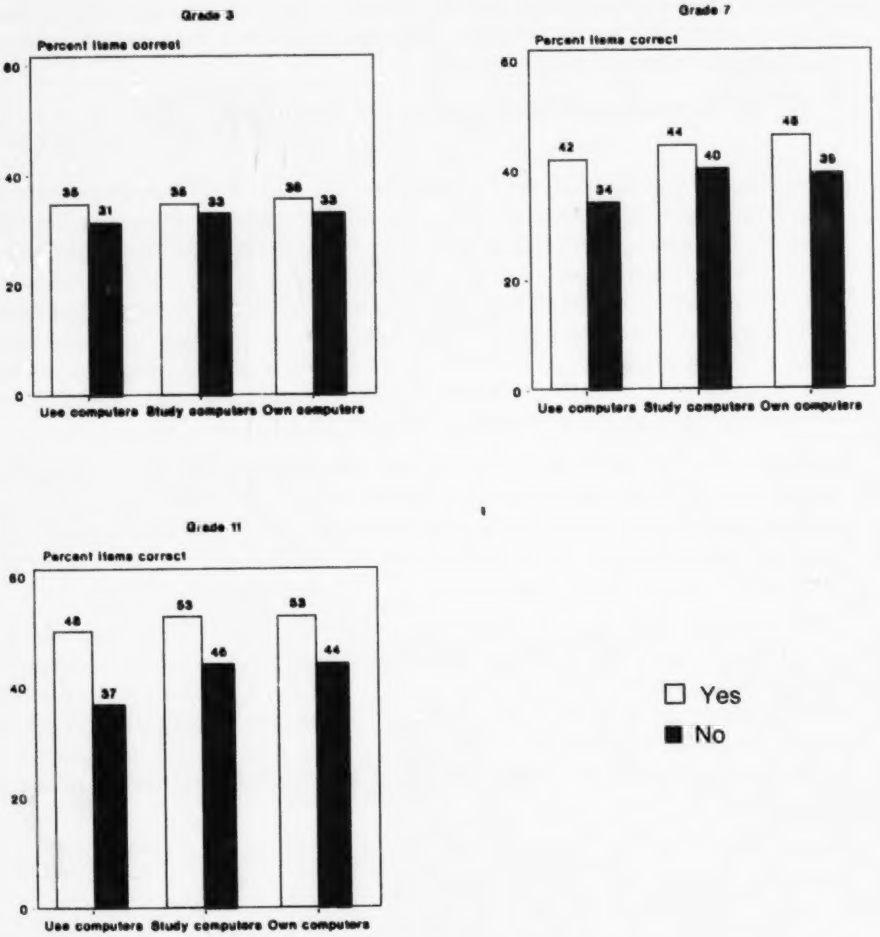
* The overall performance index appearing on the chart and corresponding table was derived by computing the mean percent correct for all items at that grade.

SOURCE: National Assessment of Educational Progress, *Computer Competence: The First National Assessment*, 1988.

Chart 1:7 Performance on NAEP computer assessment, by grade and computer experience: School year ending 1986



SOURCE: National Assessment of Educational Progress, *Computer Competence: The First National Assessment*, 1988.

A. Outcomes: Student Performance

Indicator 1:8 Change in the percent of high school graduates earning credits in "new basics"

- **The percent of high school graduates who earned 13 credits or more in "new basics" (English, social studies, mathematics, and science) increased substantially between 1982 and 1987.**
- **This increase was shared by all racial and ethnic groups.**

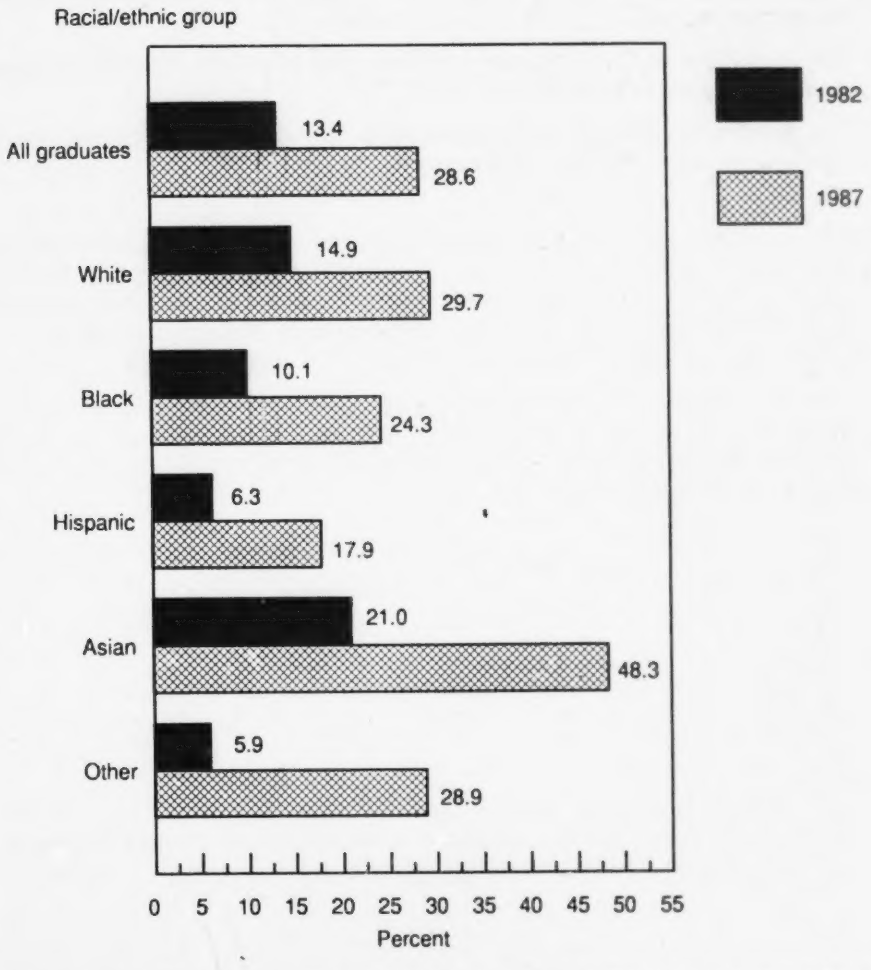
A major part of the education reform movement has been to encourage students to take, and schools to require, an increased number of basic courses in English, social studies, science, and mathematics. The National Commission on Excellence in Education recommended 4 credits in English, 3 each in social studies, science, and mathematics, 2 in foreign languages, and 0.5 in computer science. This indicator does not include the last two subjects, because many schools do not have computers for students, and many colleges do not require foreign languages for admission. If the number of students completing these requirements grows, the extent and impact of the current wave of reform will be apparent.

Between 1982 and 1987, the percent of high school graduates who completed 4 credits in English and 3 each in social studies, science, and mathematics more than doubled, from 13 percent to 29 percent. Asians showed the greatest percentage increase, from 21 percent to 48 percent, but no percentage growth of any racial/ethnic group was less than 12 percent.

While these increases are significant, they show that a majority of students still do not complete many basic courses. While Asians continue to outdistance all other groups, blacks and Hispanics lag behind. Unfortunately, these data do not provide any information as to whether the increased credits are accompanied by an increased depth of knowledge and understanding. Also, an increase in the number of credits earned does not necessarily mean a proportional increase in course content.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987 High School Transcript Study.

Chart 1:8 Percent of high school graduates who earned recommended credits in "new basics," by racial/ethnic category: 1982 and 1987



NOTE: Recommended credits in "new basics" include 4 credits of English plus 3 each of social studies, mathematics, and science.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987 High School Transcript Study.

Indicator 1:9 High school completion, by race and ethnicity

- **Nationally, about one out of every four 18- and 19-year-olds has not completed high school.**
- **The proportion of 20- to 24-year-olds who have completed high school has remained around 84 percent since 1974.**
- **The proportion of black youths, aged 18 to 19 and aged 20 to 24, who have completed high school has increased steadily since 1974.**

The public generally expects an 18- or 19-year-old to have a high school diploma or its equivalent, and most do. However, black and Hispanic youth lag behind white youth in this attainment. For example, in 1986, 77 percent of white 18- to 19-year-olds completed secondary school, but only 65 percent of black youth and 55 percent of Hispanic youth in this age group did so.

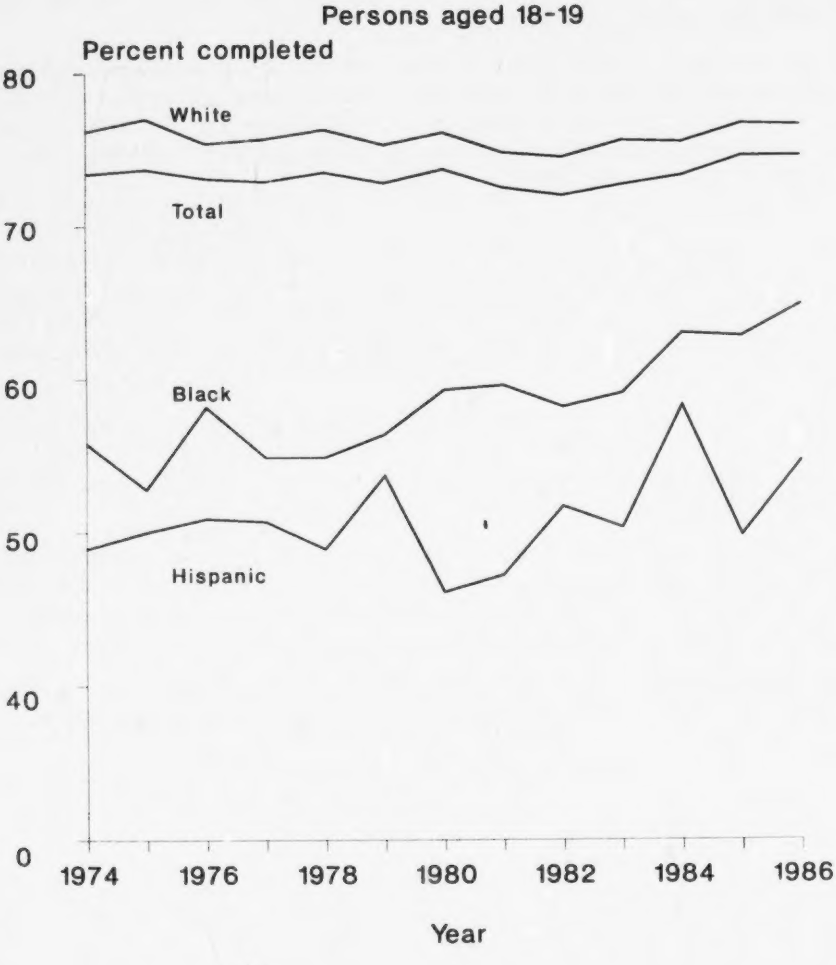
Many students complete their high school education in their early twenties. For example, the percentage of 20- to 24-year-olds who have completed secondary school is about 10 percentage points higher than for 18- to 19-year-olds. For the two age groups, completion rates were:

Year	Age: 18–19			Age: 20–24		
	White	Black	Hispanic	White	Black	Hispanic
	Percent of age group			Percent of age group		
1974	76	56	49	86	73	59
1980	76	59	46	85	74	57
1986	77	65	55	85	81	62

In 12 years, the percentage of blacks, both 18–19 and 20–24 years old, who have completed high school has increased considerably. Blacks 20–24 years old are now almost as likely as whites to have completed high school.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "School Enrollment—Social and Economic Characteristics of Students, October [various years]," *Current Population Reports*, Series P-20; and unpublished tabulations.

Chart 1:9 Trends in high school completion rates, by race and Hispanic origin: 1974–1986



NOTE: Hispanics may be of any race.

SOURCE: Bureau of the Census, *Current Population Reports*.

Indicator 1:10 College entrance examination scores

- **After years of decline, Scholastic Aptitude Test (SAT) scores began rising in 1982. Scores have remained stable since 1985.**
- **ACT scores in English, social studies, and mathematics show a somewhat steady decline from 1970 to 1980. Mathematics continued to decline through 1983, while English and social studies stabilized. From 1970 to 1983, scores in the natural sciences remained relatively stable. Since 1983, scores in all areas have shown slight increases.**

The Scholastic Aptitude Test (SAT) and the American College Testing Program Assessment (ACT) are the tests taken most frequently by college-bound students. Both are designed to predict success in the freshman year in college. The SAT tests general verbal and quantitative skills, while the ACT is more subject-matter oriented.

From 1963 to 1980, the general trend in average SAT scores for mathematics, verbal, and total (mathematics plus verbal) was downward, with most of the decline occurring prior to 1976. There was some improvement in scores between 1982 and 1985, with little change since then.

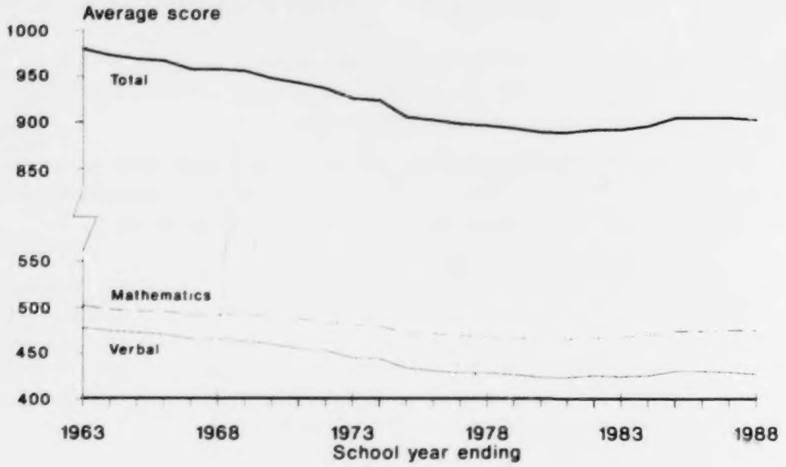
Trends for the ACT since 1970 are similar to the SAT. There was a period of decline in the 1970s, slight increases in the early 1980s and a somewhat stable performance pattern since the mid-1980s. The composite score, an arithmetical average of the 4 tests, shows periods of minor increases and decreases since 1976.

It is to be noted that the mix and percentage of students from the senior class taking these standardized tests have fluctuated over time and could impact on level of scores over time.

SOURCE: College Entrance Examination Board, *National Report: College-Bound Seniors*, various years. The American College Testing Program, *The High School Profile Report, Normative Data*, various years.

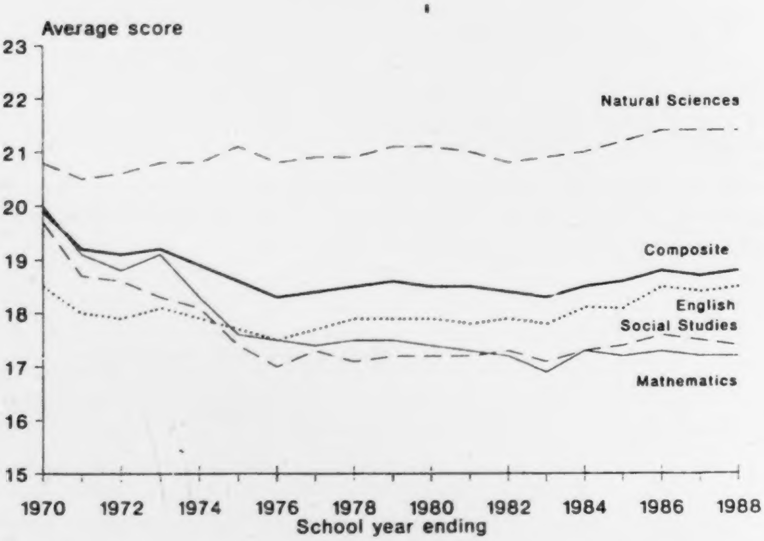
Chart 1:10 Trends in college entrance examination scores

Average SAT scores



SOURCE: College Entrance Examination Board

Average ACT scores



SOURCE: American College Testing Program

Indicator 1:11 Scholastic Aptitude Test (SAT) scores, by control of high schoo

- **In 1988, the mean verbal SAT score for students in independent schools was 30 points higher than for students in religiously affiliated schools and 44 points higher than for those in public schools.**
- **In 1988, the mean mathematics SAT score for students in independent schools was 47 points higher than for students in religiously affiliated schools and 41 points higher than for those in public schools.**

SAT scores have been watched for years as indicative of trends in high school graduates' abilities in mathematics and verbal skills. Because of the changing mix, by ability and ethnicity, of students taking these tests, definitive conclusions cannot be drawn on whether students with similar backgrounds perform better or worse now than in the past. Differences between the scores of public and private school students, however, may indicate an area for further analysis.

Public and private secondary schools differ in SAT scores for college-bound seniors. There also are differences between types of private schools. Prior to 1987, private schools were reported in a single category. Beginning in 1987, private schools were reported in two categories, "independent" and "religiously affiliated", which resulted in a more differentiated picture of SAT performance for public and private schools.

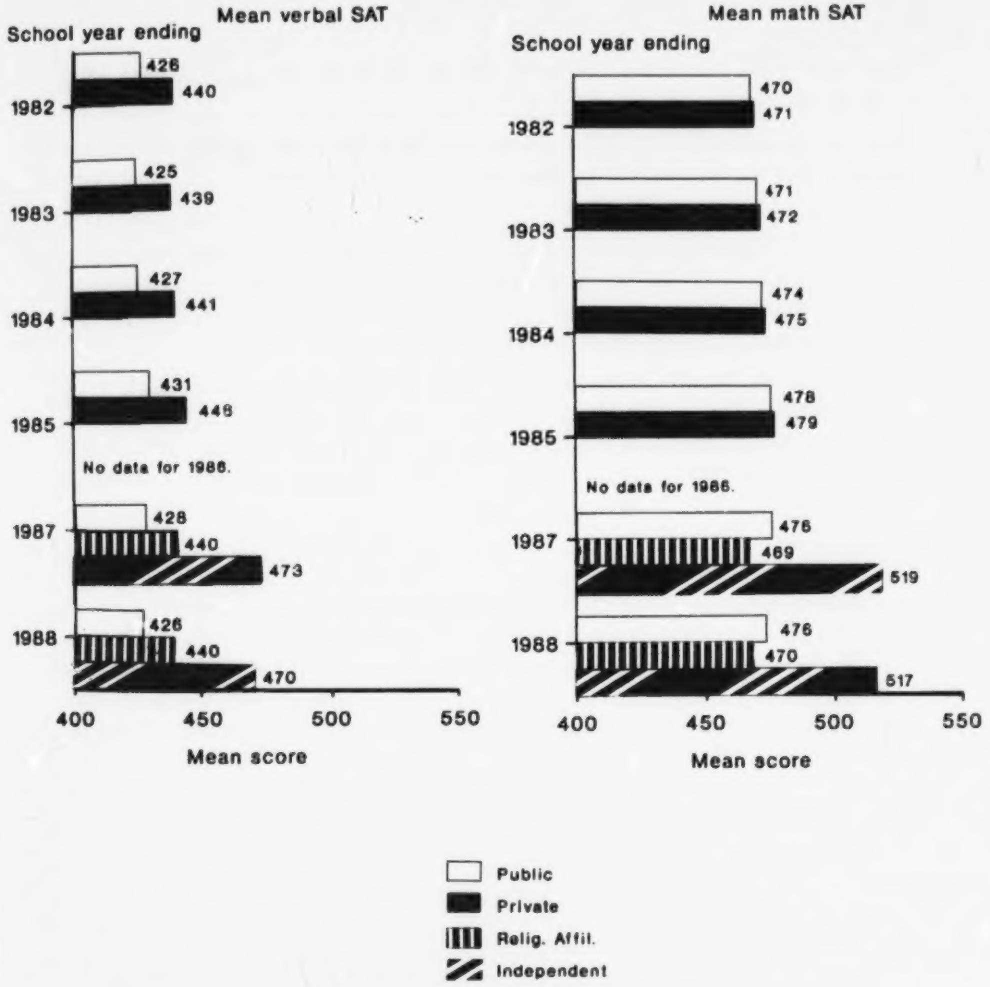
From 1982 to 1985, public and private school students' mean mathematics SAT scores were comparable. During the same time period, the mean verbal SAT score of private school students was typically 14 points higher than that of public school students.

The following table shows the performance patterns in 1988 for public, religiously affiliated, and independent school students on SAT verbal (V) and mathematics (M) tests and their differences from the national mean.

	Mean	Mean (difference from national mean)		
	National	Public	Religiously affiliated	Independent
V	428	426 (-2)	440 (+12)	470 (+42)
M	476	476 (0)	470 (- 6)	517 (+41)

SOURCE: College Entrance Examination Board, *The National Report of College-Bound Seniors, Profile of SAT and Achievement Test Takers*, various years.

Chart 1:11 Mean verbal and math SAT, by control of high school: 1982–1988



NOTE: As of 1987, private is reported as religiously affiliated or independent.

SOURCE: College Entrance Examination Board, *The National Report of College-Bound Seniors, Profile of SAT & Achievement Test Takers*, various years.

Indicator 1:12 Unemployment rates of high school graduates and high school dropouts, 20–24 years old

- **High school dropouts tend to have higher unemployment rates than high school graduates.**
- **Unemployment rates of blacks are much higher than rates of whites or Hispanics, whether dropouts or graduates.**

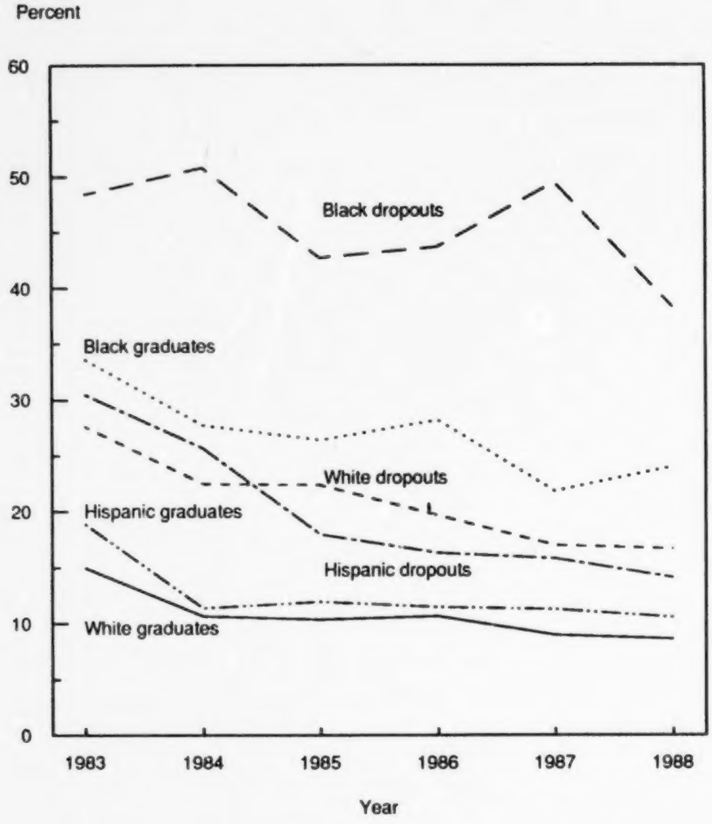
Students are regularly urged to complete high school, partly because of the undesirable economic consequences of dropping out for both the individual and society. Recent Federal legislation has re-emphasized concern about dropouts by providing funding for dropout prevention programs.

For young adults, those who have dropped out of high school are more likely to be unemployed than those who completed high school. Since 1983, high school dropouts, aged 20–24, have had unemployment rates 10–14 percentage points higher than those of graduates. Clearly, dropouts have not shared in the strong job market of recent years.

Unemployment rates vary significantly by race and ethnicity. A far greater proportion of blacks is unemployed than whites and Hispanics, whether dropouts or graduates. Black graduates 20–24 years old have unemployment rates similar to those of white dropouts in this age group. For Hispanics, the unemployment rate of dropouts was not significantly different from that for graduates in 1988, but the rate had been significant in every year between 1983 and 1987. Looking only at unemployment rates may hide the fact that many of the individuals in each of these groups may be in relatively low paying jobs.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, "Educational Attainment of Workers, March [various years]."

Chart 1:12 Unemployment rates of high school graduates and high school dropouts, by race and ethnicity: March 1983–March 1988



NOTE: Dropouts are those identified as completing 1-3 years of high school.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, "Educational Attainment of Workers, March [various years]."

B. Resources

B. Resources: Fiscal Resources

Indicator 1:13 Public school revenues

- **Since 1920, State and local governments have been the primary source of revenues for public elementary and secondary education; the Federal share has remained small.**
- **In 1979, an historic shift occurred when the States' share of revenues rose above the locals' share for the first time.**
- **Between the 1969–70 and 1986–87 school years, the State share of total revenues rose from about 40 percent to about 50 percent, the local share dropped from about 52 percent to about 44 percent, and the Federal share dropped from 8 percent to about 6 percent.**

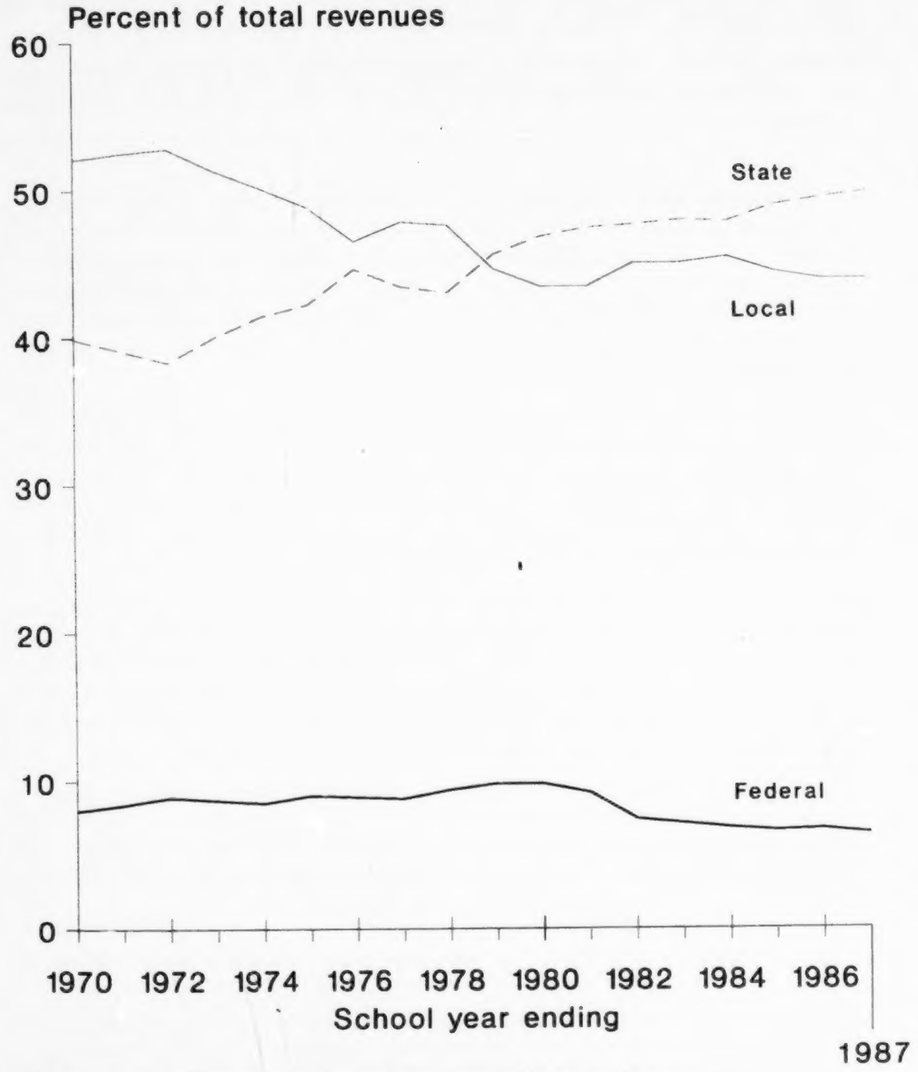
Public schools obtain revenues from three principal sources: local, State, and Federal governments. The share that each contributes is determined by many factors, including the public's perception of the role of various levels of government; the extent to which taxes are raised by various levels; the size of various tax bases; and the competing demands on tax revenues at various levels. Historically, local governments have been limited primarily to property taxes and State grants as a basis for raising funds. In recent years, voters in some States have limited the use of property taxes to generate additional funds (e.g., Proposition 13 in California). By comparison, most State governments use both the sales tax and income tax as revenue-raising vehicles. Recently, some States have earmarked a percentage of the revenue from State lotteries for education.

From school year 1919–20 through school year 1973–74, local governments provided more than 50 percent of all revenues for local elementary and secondary schools. Reflecting school finance reform efforts, including court cases, by the 1978–79 school year, more funds were provided by State governments than any other source.

Since the 1978–79 school year, the percent contributed by State governments has continued to rise, but more slowly than in much of the 1970s. In the 1986–87 school year, the State governments' contribution was comparable to the *combined* contribution from local and Federal governments. The percent for *each* State government's contribution, however, may vary considerably from the *total* State governments' contribution of 49.8 percent in 1987.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on Common Core of Data survey and its predecessors).

Chart 1:13 Trends in revenue sources for public elementary and secondary education: 1970–1987



SOURCE: National Center for Education Statistics, *Digest of Education Statistics, 1988.*

Indicator 1:14 Expenditure per pupil in public schools

- **Between the 1949–50 and 1986–87 school years, current expenditure per pupil in constant dollars almost quadrupled, from $982 to $3,977 per pupil.**
- **Between 1977–78 and 1981–82, current expenditure per pupil in constant dollars remained relatively unchanged, but then began rising from 1982–83 to 1986–87.**

One frequently used measure of financial resources available to public schools is per pupil expenditure. This measure is the ratio of expenditures for education to average daily attendance. Data on trends in per pupil expenditure provide information to policymakers at all levels of government on the overall availability of resources. However, they do not provide information about individual school district expenditures, the quality or type of resources provided, or their impact on the learning process.

Current expenditure includes spending for operating local public schools, including such items as salaries, fixed charges, student transportation, books and materials, and energy costs. Excluded are long-term expenses of capital outlay and interest on school debt, as well as community service. Total expenditure includes current expenditure plus these long-term expenses. Total and current expenditure may be expressed in both current and constant dollars, the latter adjusted for inflation.*

In constant dollars, current expenditure has grown at a faster rate than total expenditure, 305 versus 259 percent between school years 1949–50 and 1986–87, respectively. The growth rate of current expenditure, however, was not uniform. After rising steadily from 1949–50 to 1977–78, per pupil expenditure in constant dollars leveled off and remained relatively unchanged until 1982–83, when it began rising once again. (See *Indicator 1:21* for public school enrollment from 1972).

Trends in current expenditure per pupil vary widely from State to State and may not necessarily reflect national patterns. While current expenditure per pupil in the United States rose almost 66 percent in constant dollars between school years 1969–70 and 1986–87, State-level percentage increases varied during the same period from 142 percent (Alaska) to 31 percent (Utah).

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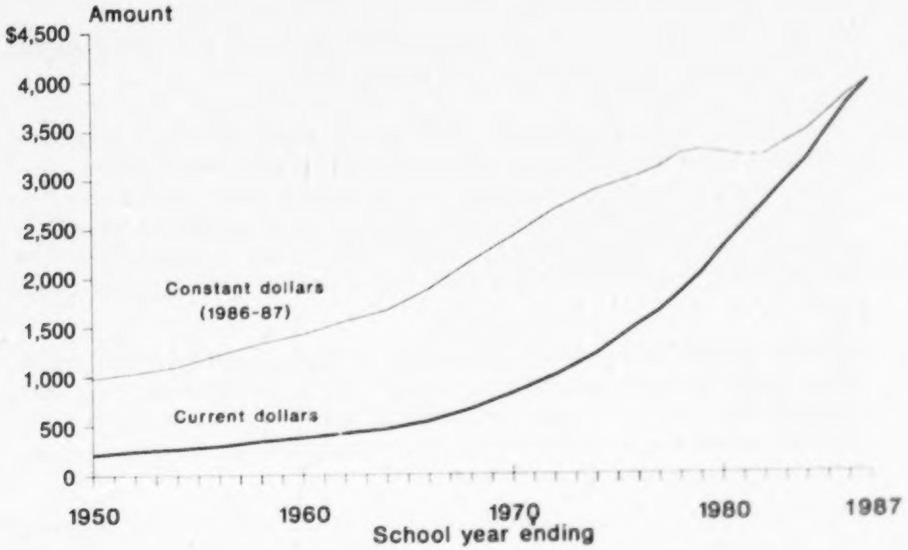
* Based on the Consumer Price Index for urban wage earners, prepared by the Bureau of Labor Statistics, U.S. Department of Labor. Data were adjusted from a calendar- to a school-year basis.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of State School Systems*, various years; *Revenues and Expenditures for Public Elementary and Secondary Education*, various years; Common Core of Data survey, various years; and unpublished data.

Chart 1:14 Trends in current expenditure per pupil in average daily attendance in public schools: Selected school years ending 1950–1987



NOTE: Plotted years: even, 1950–1976; all, 1977–1987.

SOURCE: National Center for Education Statistics, *Statistics of State School Systems* and *Revenues and Expenditures for Public Elementary and Secondary Education*, Common Core of Data survey.

B. Resources: Fiscal Resources

Indicator 1:15 National index of public school revenues per pupil in relation t per capita income

- **The national index gauging per pupil revenues in relationship to per capita income has risen 64 percent since school year ending 1940.**
- **The national index fell 1 point between school years 1981 and 1982, but overall has risen 2 points since school year ending 1982.**

Countries often report the percent of GNP devoted to education as a measure of fiscal resources going to education. The national index presented here is a refinement of that approach. The numerator is revenues per pupil,* a measure of the resources or services accorded the typical pupil. The denominator is income per capita, a measure of the typical taxpayer's ability to pay. Therefore, the index reflects what is spent on the typical student relative to the typical taxpayer's ability to pay.

Four factors make up this index: 1) the number of pupils enrolled in public schools, 2) public education revenues, 3) total personal income, and 4) the total population. Between school years 1940 and 1988, the national index has risen 64 percent. This indicates that 64 percent more funds were available per student in 1987-88 in relation to per capita income than in 1939-40.

Changes over time in the overall index can be due to circumstances affecting any of the four factors. An increase in the index means either that per pupil revenues have grown relative to ability to pay, or that per capita income has declined relative to revenues per pupil. Conversely, a decline in the index demonstrates either that the resources accorded the typical pupil have declined relative to per capita income or that ability to pay has increased relative to per pupil revenues.

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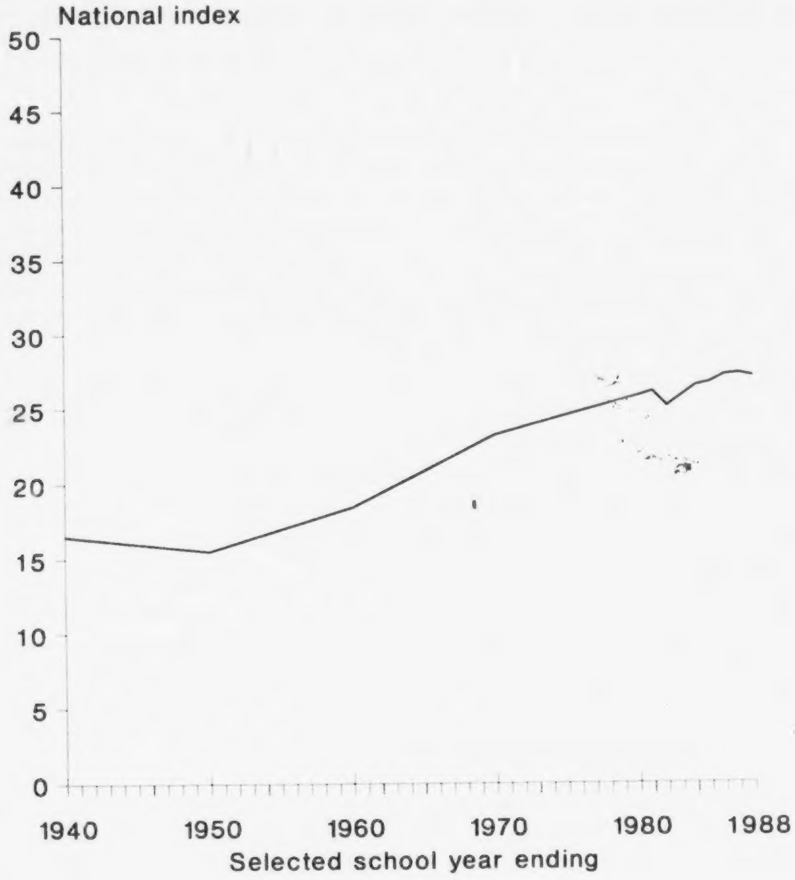
* Per pupil education revenues are the ratio of total public school education revenues (REV) to public school enrollment (ENR). Per capita income is the ratio of total personal income (INC) to total population (POP). The index can be expressed algebraically, therefore, as a function of four variables:

$$\frac{\text{Per pupil education revenues}}{\text{Per capita income}} \qquad \text{OR} \qquad \frac{\dfrac{REV}{ENR}}{\dfrac{INC}{POP}} \times 100$$

NOTE: This formula does not include private school enrollments or revenues, nor does it take into account other types of support of the public schools, such as volunteer work by parents.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest Of Education Statistics, 1989* (based on Common Core of Data Surveys, various years); and unpublished data. U.S. Department of Commerce, Bureau of Economic Analysis, *State Personal Income: 1929-82*, 1984, and *Regional Economic Information System*, August 1987.

Chart 1:15 Trends in the national index of public school revenues per pupil in relation to per capita income: 1940–1988



NOTE: Plotted points are 1940, 1950, 1960, 1970 and 1980–1988.

SOURCE: National Center for Education Statistics, *Digest of Education Statistics*, forthcoming. Bureau of Economic Analysis, *Survey of Current Business*, August 1988.

Indicator 1:16 Staff employed in public school systems

- **Between 1959–60 and 1982–83, the proportion of classroom teachers has declined from 65 percent to 54 percent of total staff in the public schools.**
- **Since 1983, the composition of public school staff has changed little.**

Today's public school systems employ a large number of personnel other than teachers, from district-level administrators to building maintenance workers. Diverse factors may cause the number and categories of staff to change over time. These factors include demographic changes as well as policy decisions at all levels of government. Examples include: (1) changes in pupil enrollment; (2) changes in the pupil/teacher ratio; (3) changes in legislative requirements; (4) the increased use of different types of instructional personnel; and (5) the addition of noninstructional tasks and responsibilities.

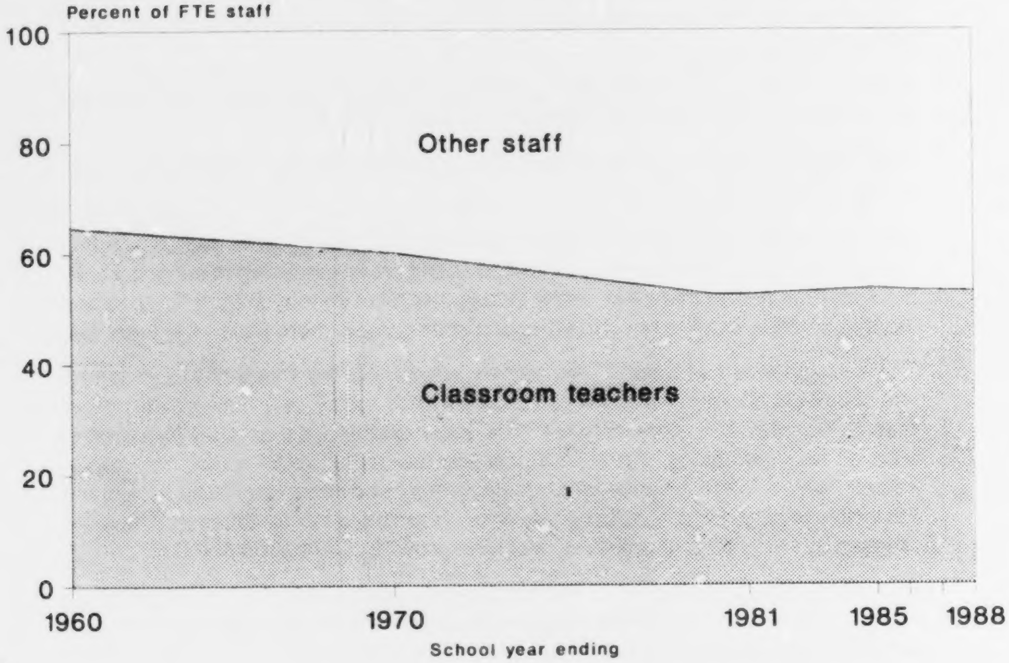
The number and types of staff employed by the public school systems of this country have changed considerably. Between school years 1959-60 and 1987–88, total full-time-equivalent (FTE) staff doubled (from about 2 million to over 4 million). The number of teachers employed grew substantially (from nearly 1.4 million to more than 2.3 million). Despite this growth, the percentage of teachers in relation to the total staff declined during this period from 65 percent to 53 percent.

In school year 1987–88, school systems employed about 4.3 million FTE staff. If the number of instructional support staff (instructional aides, guidance counselors, and librarians) is added to the number of classroom teachers, all instructional personnel would account for more than 63 percent of total staff. Administrators and administrative support staff would comprise another 13 percent, while other support staff (including, among others, bus drivers, security officers, and cafeteria workers) would make up the remaining 24 percent.

Over the last 7 years, the percentages of classroom teachers, instructional support, administrators and administrative support, and other support have changed very little. However, during the last 3 years, enrollments have been rising in the elementary schools (see *Indicator 1:21*). To date, this increase in enrollment has not been matched by a corresponding rise in the percentage of teachers on school staffs.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of State School Systems*, various years; *Digest of Education Statistics, 1985–86, 1987*, and *1988* and forthcoming.

Chart 1:16 **Classroom teachers as a proportion of total public school staff: Selected school years ending 1960, 1970, 1981, and 1985–1988**



SOURCE: National Center for Education Statistics, *Statistics of State School Systems* and *Digest of Education Statistics*, various years.

B. Resources: Human Resources

Indicator 1:17 Average annual salaries of public school teachers

- **Since school year 1980–81, average teacher salaries, adjusted for inflation, have risen almost 19 percent after declining 14 percent between 1972–73 and 1980–81.**
- **Teacher salaries at both elementary and secondary levels have risen at about the same rate (19 percent and 18 percent) since 1980–81.**
- **In 1987–88, the buying power of teachers' salaries was the highest in 30 years.**

There is an emphasis on the need to improve the quality of students entering teacher education and to enhance the status and professionalism of current teachers.[1] In response to this need, many States and local school districts have raised teacher salaries with the hope of attracting and retaining more and better teachers.

The average salary of a public elementary school teacher was $27,423 in school year 1987–88. During the same year, the average salary of a public high school teacher was $28,895. Through the 1970s, although the dollar amount of teachers' salaries was increasing, the buying power of teachers' salaries declined. Since school year 1980–81, salaries for both elementary and secondary school teachers have been rising steadily. Average salaries, when adjusted for inflation,[2] have increased by 19 percent; unadjusted, they have grown by close to 60 percent.

Education officials in all parts of the country are experimenting with teacher salary structures, creating new career steps, career ladders, merit pay schemes, and new positions with greater authority and responsibility. In the past, such experiments have been associated with increases in teachers' salaries.[3]

Salaries paid to teachers usually vary by length of service and level of education. Differences in average salaries are affected by changes in these factors as well as general salary levels.

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[1] Linda Darling-Hammond and B. Berry, *The Evolution of Teacher Policy*, Center for Policy Research in Education, May 1987.

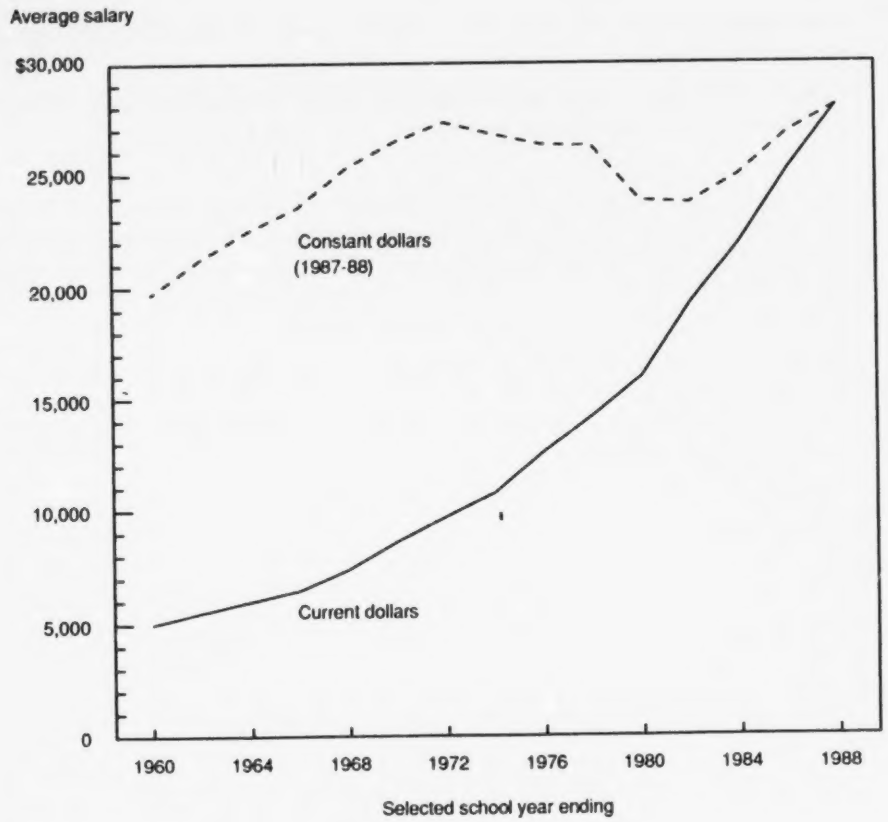
[2] Based on the Consumer Price Index (revision of 1988), prepared by the Bureau of Labor Statistics, U.S. Department of Labor, and adjusted to a school-year basis.

[3] Carnegie Forum on Education and the Economy, *A Nation Prepared*, 1986.

NOTE: Salary data are also collected by the American Federation of Teachers. Its latest research report is *Survey and Analysis of Salary Trends, 1988*, 1988.

SOURCE: National Education Association, *Estimates of School Statistics, 1987–88*, 1988, copyrighted (all rights reserved).

Chart 1:17 Trends in average annual salaries of teachers in public schools



SOURCE: National Education Association, *Estimates of School Statistics*, various years, copyrighted.

B. Resources: Human Resources

Indicator 1:18 Pupil/teacher ratios in public schools

- **Pupil/teacher ratios are consistently higher in elementary schools than in secondary schools.**
- **Pupil/teacher ratios have been dropping steadily since school year 1959–60 at both elementary and secondary levels.**

The pupil/teacher ratio reflects the relationship between the number of students enrolled and the number of full-time-equivalent instructional personnel [1] available to teach them. This ratio is of interest because of the popular assumption that with a lower pupil/teacher ratio higher student achievement will result. Research data, however, have generally not supported this assumption.[2]

Between 1959–60 and 1987–88, the pupil/teacher ratio in public elementary schools has declined from 28.7:1 to 19.5:1, a decline of 32 percent. During the same period, the pupil/teacher ratio in public secondary schools went from 21.5:1 to 15.3:1, a reduction of 29 percent.

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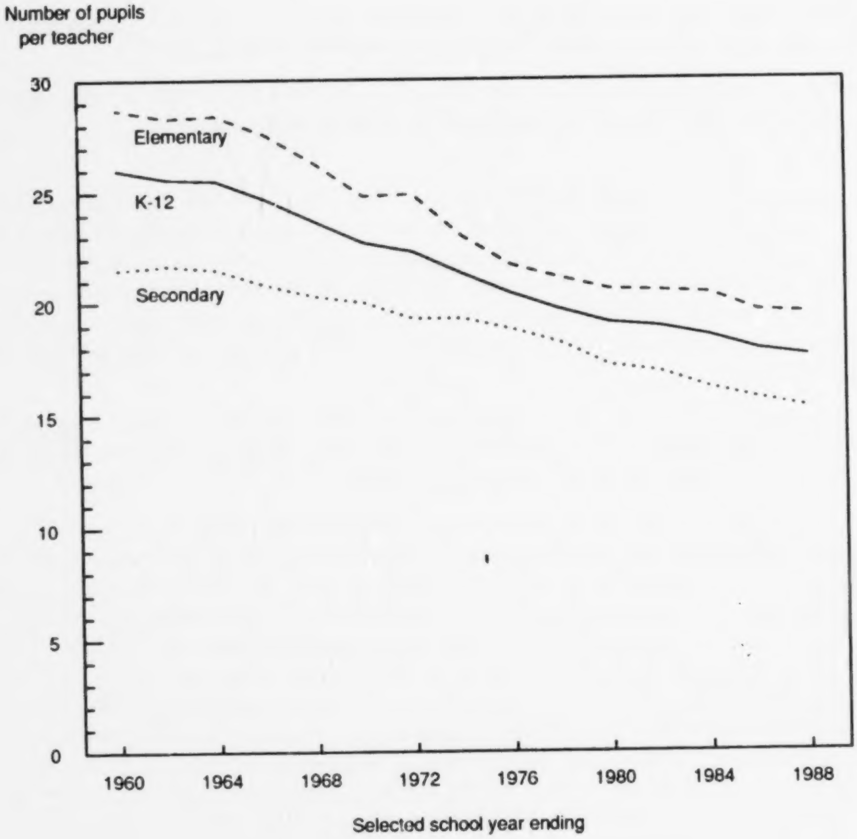
[1] Full-time-equivalent teachers include not only regular classroom teachers but also those, such as art, music, and special education teachers, who do not have regular classroom assignments. This category excludes staff who are not teachers but who provide educational services outside the classroom, such as counselors and librarians.

[2] U.S. Department of Education, Programs for the Improvement of Practice, *Class Size and Public Policy: Politics and Panaceas*, 1988.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of Public Elementary and Secondary Day Schools*, various years, and Common Core of Data survey, various years.

Chart 1:18 Pupil/teacher ratios in public elementary and secondary schools



SOURCE: National Center for Education Statistics, *Statistics of Elementary and Secondary Day Schools*, various years, and Common Core of Data survey, various years.

Indicator 1:19 Demand for new hiring of public school teachers

- **The projected annual demand for new hiring of elementary school teachers in public schools is expected to stabilize somewhat through 1997.**
- **For secondary school teachers, the projected annual demand is expected to increase rapidly from 1989 until 1995 before declining slightly.**

Projections of the need for hiring teachers help school officials plan their budgets. Such projections also aid policymakers who must devise and implement incentives to attract qualified individuals to the teaching profession. And, as an indicator of the future job market, such projections help those considering teaching as a career. The projected demand for new hiring may change for a variety of reasons, including fluctuations in student enrollment, changes in the pupil/teacher ratio, and teacher turnover.*

The projected numbers shown depict national trends. But the demand for new hires will vary by geographical location and subject area as States experience different rates of teacher turnover and enrollment growth.

The actual *numbers* of annual new hires are expected to remain consistently higher for public elementary schools than for public secondary schools between 1989 and 1997. Total demand for new hiring is expected to swell more than 24 percent by 1995, when it will peak. Most of this expected increase can be attributed to a rise of 57 percent in new hiring at the secondary school level between 1988 and 1995. While secondary schools will seek to fill 53,000 teaching slots in the fall of 1989, about 86,000 positions are projected to open in 1995. Various factors may account for this large jump, including rising secondary school enrollments (see *Indicator 1:21*) and teacher turnover. Demand for secondary school teachers is expected to decline after 1995, to a level of 83,000 in 1997. Larger enrollments are expected to contribute to greater demand for new hiring of elementary school teachers earlier in the 1980s, but the demand should level off starting in 1989, rising only 2 percent over the projection period.

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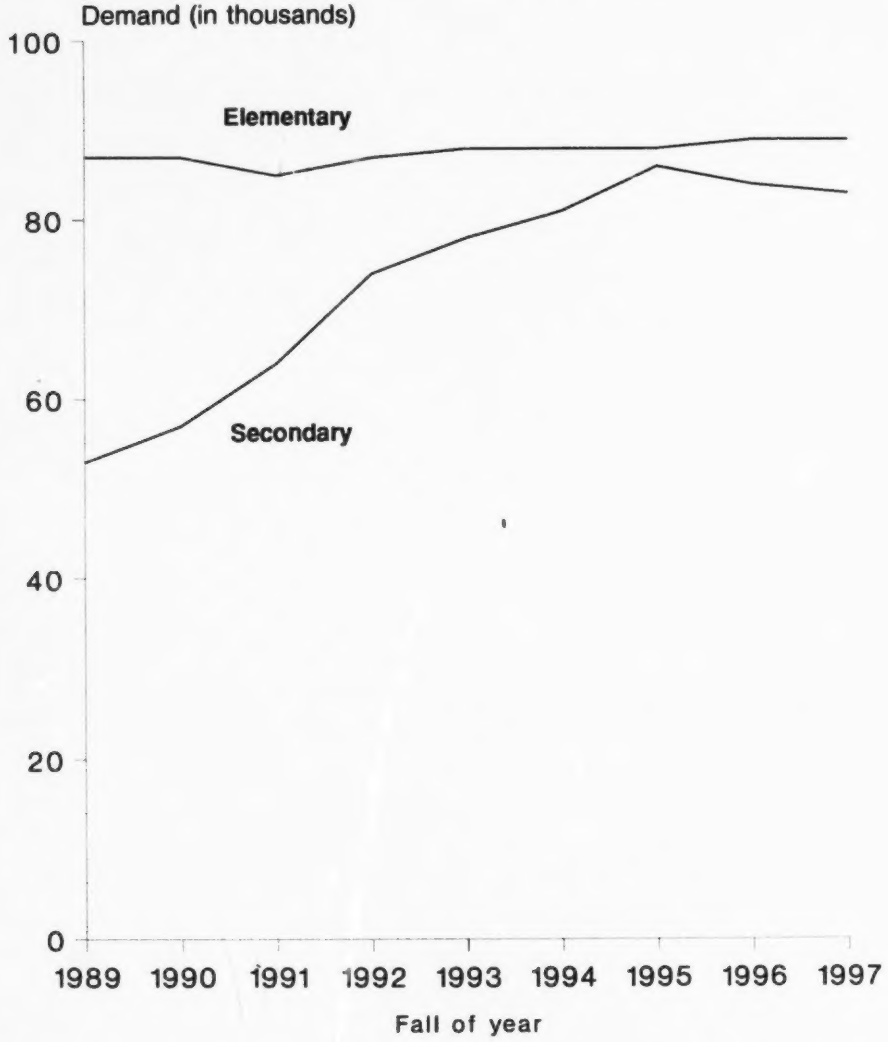
*Teacher turnover rate is assumed to be 4.9 percent at the elementary level and 5.6 percent at the secondary level (Bureau of Labor Statistics, unpublished tabulations). Turnover accounts for a far greater share of new hiring than do other factors, such as enrollment increases.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1997–98*, 1988.

Chart 1:19 Projected annual demand for new hiring of teachers, by level: 1989–1997



SOURCE: National Center for Education Statistics, *Projections of Education Statistics to 1997-98*, 1988.

C. Context

C. Context: Student Characteristics

Indicator 1:20 Public and private school enrollment trends

- **After a period of relative stability in the early 1980s, public elementary school enrollment rose in 1986, while private elementary school enrollment remained essentially unchanged.**
- **High school enrollment in public schools rose during the early and mid-1970s, then began a downward trend through the early 1980s, and then stabilized; private school enrollment at the high school level changed little during this period.**

Education in the United States benefits from a long history of traditions regarding its schools. The tradition of public education has been complemented by a history of private, religiously oriented schools, as well as nonparochial or independent institutions.

Elementary school enrollment dropped sharply in both public and private schools in the 1970s, but changed little during the first half of the 1980s. An increase in public elementary enrollment occurred in 1986. High school enrollment in public schools rose in the early to mid-1970s and then turned downward, continuing on that path through the early 1980s. It has stabilized since.[1] Private high school enrollment has remained relatively stable since 1970.[2]

The percentage of all students who attend private schools has remained fairly stable since 1970. In 1986, almost one in nine students in kindergarten through grade 12 attended a private school.[3]

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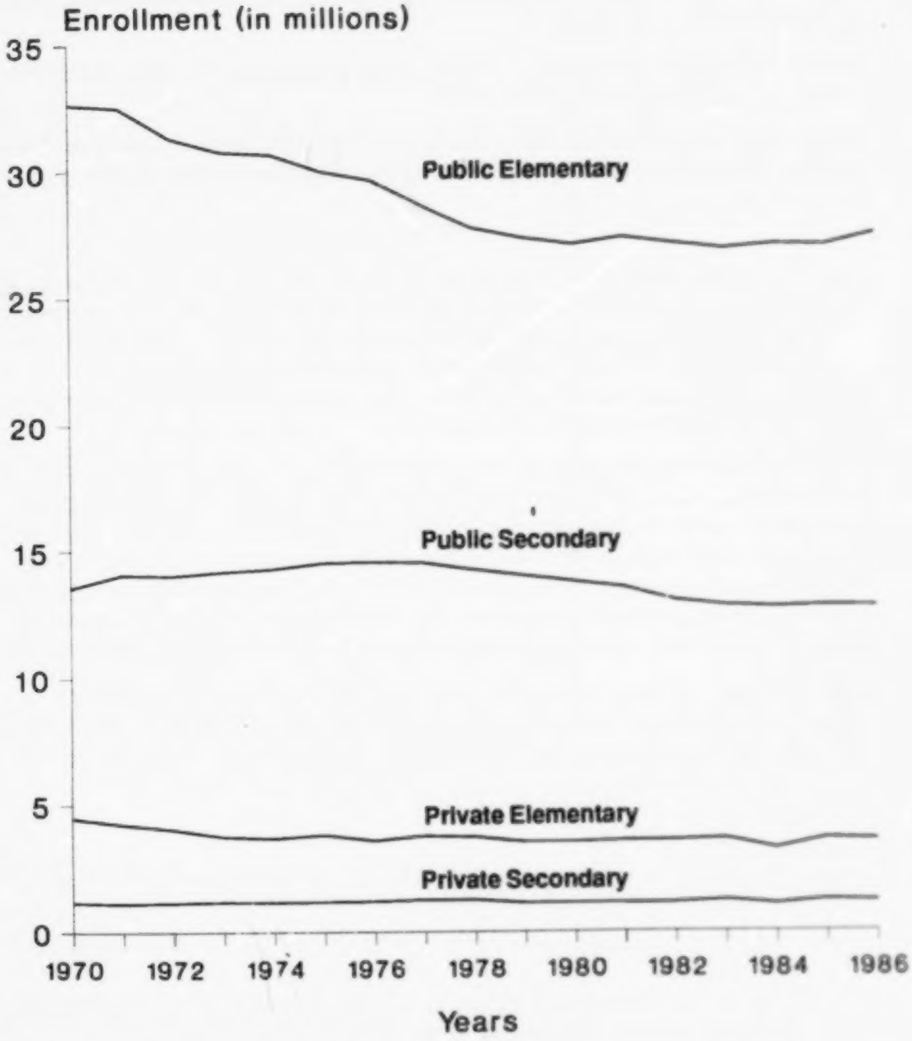
[1] See *Indicator 1:21* for a discussion of projected public school enrollment to 1997-98. Projected enrollments are not available for private schools.

[2] An unexplained drop occurred in the number and proportion of private school students in 1984, according to the Bureau of the Census. However, the 1984 data appear to be an anomaly, since the 1985 and 1986 figures are consistent with the trend for 1979 to 1983.

[3] There are two major sources of data on private school enrollment: the annual School Enrollment Supplement to the October Current Population Survey (CPS) and intermittent Private School Surveys conducted by the National Center for Education Statistics. The two sources sometimes produce differing estimates of the total number and proportion of private school students. For further discussion of data sources on private school enrollment, see U.S. Department of Education, *The Condition of Education, 1986 Edition*, pp. 186–201.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "School Enrollment—Social and Economic Characteristics of Students: October 1984 (Advance Report)," "October 1985 (Advance Report)," "October 1986 (Advance Report)," *Current Population Reports*, Series P-20, Nos. 404 and 409.

Chart 1:20 **Trends in public and private school enrollment, by grade level: 1970–1986**



SOURCE: Bureau of the Census, *Current Population Reports*.

C. Context: Student Characteristics

Indicator 1:21 Trends in public school enrollment: 1972–1997

- **Total public elementary/secondary school enrollment declined during most of the 1970s and early 1980s.**
- **Enrollment in public elementary schools began to increase in 1985 and is projected to continue rising through 1997.**
- **The number of public secondary school students is expected to continue falling until 1991 and then begin to increase as students pass through the education system.**

Total public elementary and secondary enrollment declined through most of the 1970s and into the early 1980s as the baby boom generation grew older and moved through and out of the school system. Separately, the pattern for elementary and secondary enrollment [1] differed somewhat from the total enrollment trend. The number of elementary school students reached a record high in 1969, while secondary school enrollments peaked in 1976.

In part, because the children born during the baby boom years of 1946 to 1964 [2] tended to delay marriage and childbearing, their offspring did not begin to produce a rise in public school enrollment figures until 1985. This baby boomlet is expected to continue swelling the number of elementary school students through 1997 (though the numbers will not return to record levels). Secondary school enrollments are expected to continue falling through 1990, and then the large numbers of elementary school students moving on to high school will raise secondary school enrollments.

State-by-State trends in elementary and secondary enrollment present an extremely varied picture.[3] Local economic and demographic characteristics and growth patterns vary substantially from State to State, directly affecting the size of a State's school-age population.

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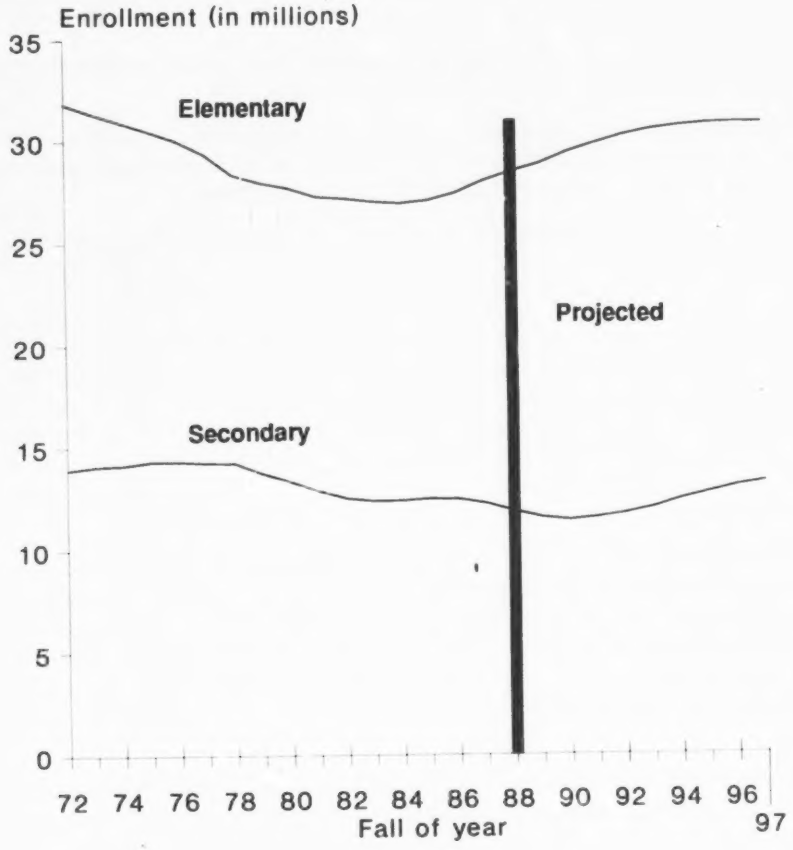
[1] Elementary enrollment includes most kindergarten and some prekindergarten enrollment, as well as grades 1 through 8. Secondary school enrollment includes grades 9 through 12.

[2] Leon F. Bouvier, "America's Baby Boom Generation: The Fateful Bulge," *Population Bulletin*, April 1980, 35:1.

[3] For changes in State public school enrollment, see U.S. Department of Education, National Center for Education Statistics, *Statistical Trends: State Facts 1975 to 1985*, 1988.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1997–98*, 1988.

Chart 1:21 Trends in public school enrollment: Fall 1972–1997



SOURCE: National Center for Education Statistics, *Projections of Education Statistics to 1997-98*, 1988.

C. Context: Student Characteristics

Indicator 1:22 Public school enrollment by race and ethnicity: 1976, 1984, and 1986

- **From 1976 to 1986, there was an increase in the number and proportion of minority students enrolled in the public schools.**
- **Hispanic enrollment grew from 2.8 million in 1976 to over 4 million in 1986, up 44 percent. During the same period, Asian enrollment increased from 535,000 to over 1 million, a proportional increase of 116 percent.**
- **White enrollment decreased by almost 13 percent during the same time period.**

Between 1976 and 1986, the ethnic and racial composition of the public schools underwent considerable change, caused by a rapidly increasing minority population. The greatest expansion occurred among the Asian and Hispanic populations. These increases portend a greater degree of heterogeneity of language and culture in the schools. Since many minorities come from impoverished families, as well, the changing enrollment patterns present the public schools and policymakers with challenges which must be met with bold and effective programs.

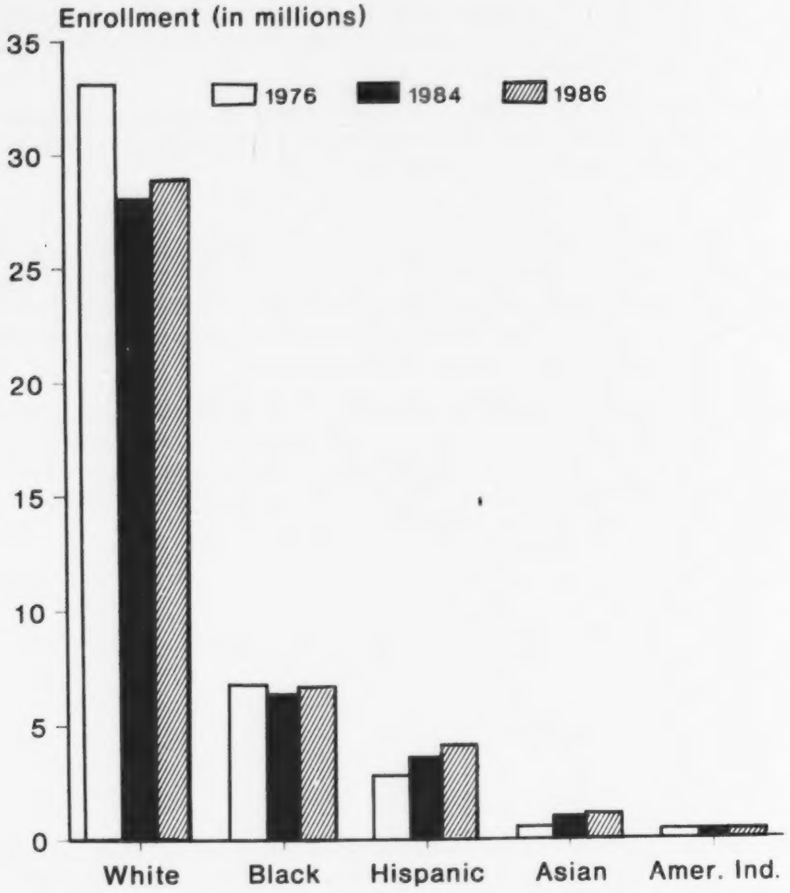
Nationally, the majority of the student population remains white. Twelve years ago white students accounted for about 76 percent of public school enrollment. That figure dropped to approximately 70 percent in 1986. At the same time, minority student enrollments increased from 24 percent of total enrollment in 1976 to almost 30 percent in 1986. In 1986, almost one out of every three students in American public schools was a minority student.

Asians experienced the most rapid growth during the 1976–86 period. They accounted for 2.8 percent of the total school enrollment in 1986, up from 1.2 percent in 1976, more than doubling their enrollment figures. Hispanics gained almost 45 percent, and accounted for 9.9 percent of total 1986 school enrollment.

From 1976 to 1984, enrollment figures for both blacks and whites declined, while Hispanic and Asian enrollment increased. In 1985, the elementary schools began experiencing a baby boomlet. Whites along with every minority group except American Indians experienced an upsurge in enrollment rates.

SOURCE: U.S. Department of Education, Office for Civil Rights, *Directory of Elementary and Secondary School Districts and Schools in Selected Districts: 1976–77*; and 1984 and 1986 Elementary and Secondary School Civil Rights survey, unpublished tabulations.

Chart 1:22 **Enrollment in public elementary and secondary schools, by race and ethnicity: Fall 1976, 1984, and 1986**



SOURCE: U.S. Department of Education, Office for Civil Rights, *Directory of Elementary and Secondary School Districts and Schools in Selected Districts: 1976–77*; and 1984 and 1986 Elementary and Secondary School Civil Rights survey.

C. Context: Student Characteristics

Indicator 1:23 Special education enrollment in federally supported programs

- **The total number of special education students rose between 1976-77 and 1987-88 from 3.7 to 4.4 million, due primarily to the growth in the number of students classified as learning disabled. This growth exceeded that of all the other groups combined.**
- **As a percent of the total public school enrollment, the number of special education students rose from 8 percent in 1976-77 to 11 percent in 1987-88. This percentage has changed little in the last 5 years.**

The Education of the Handicapped Act, enacted by Congress in 1975, ensures the availability of a "free and appropriate public education" to all children with handicapping conditions. Examining changes in the number and distribution of such students helps educators and policymakers assess the efforts to comply with this mandate and forecast the need to generate more resources.

Since the law was implemented on September 1, 1978, the number of children enrolled in federally supported special education programs has risen each year.[1] The increases were primarily due to the growing number of children classified as learning disabled.[2] This trend continued through 1988. During the same time period, the number of students classified as mentally retarded declined.

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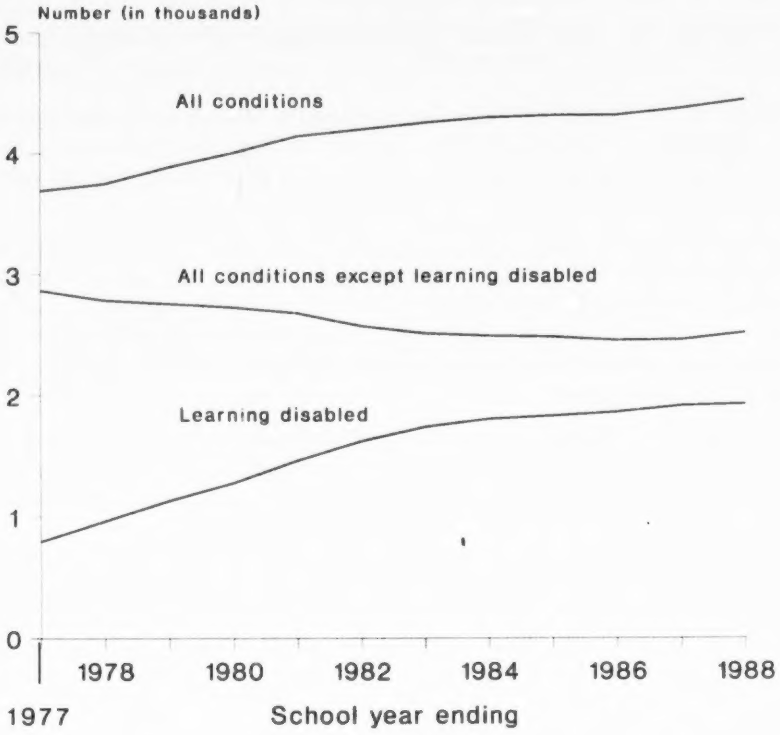
[1] The total count of children in special education programs includes children served under Part B of the Education of the Handicapped Act (EHA-B) and Chapter 1 of the Education Consolidation and Improvement Act in State-Operated Programs (ECIA-SOP).

[2] The figures reflected in this indicator are based on reports from the 50 States and the District of Columbia only (figures from the U.S. territories are not included).

SOURCE: U.S. Department of Education, Office of Special Education and Rehabilitative Services, *Annual Report to Congress on the Implementation of the Education of the Handicapped Act*, various years; National Center for Education Statistics, Common Core of Data survey; and unpublished tabulations.

Chart 1:23 **Trends in the number of handicapped students served in federally supported education programs: School years ending 1977–1988**



SOURCE: U.S. Department of Education, Office of Special Education and Rehabilitative Services, *Eleventh Annual Report to Congress on the Implementation of the Handicapped Act*, 1989.

C. Context: Learning Environment

Indicator 1:24 Teacher perceptions of disruptive behavior in the public schools

- **About 44 percent of teachers surveyed in 1987 said that disruptive student behavior had increased in the last 5 years.**
- **In the teachers' view, school discipline policies have improved significantly since 1980; still, half reported that policies were not consistently applied.**

Research on effective schools has identified a safe, orderly environment as a prerequisite to promoting student academic success. Educators and others are, therefore, interested in examining indices of student discipline and classroom environment.

In assessing the incidence of student disruptive behavior in 1987, 19 percent of public school teachers surveyed by the U.S. Department of Education felt there was "much more" disruptive behavior in their schools than 5 years before; another 25 percent indicated there was "somewhat more" now. Indeed, almost one-third of the teachers surveyed stated they had seriously considered leaving teaching because of student misbehavior.

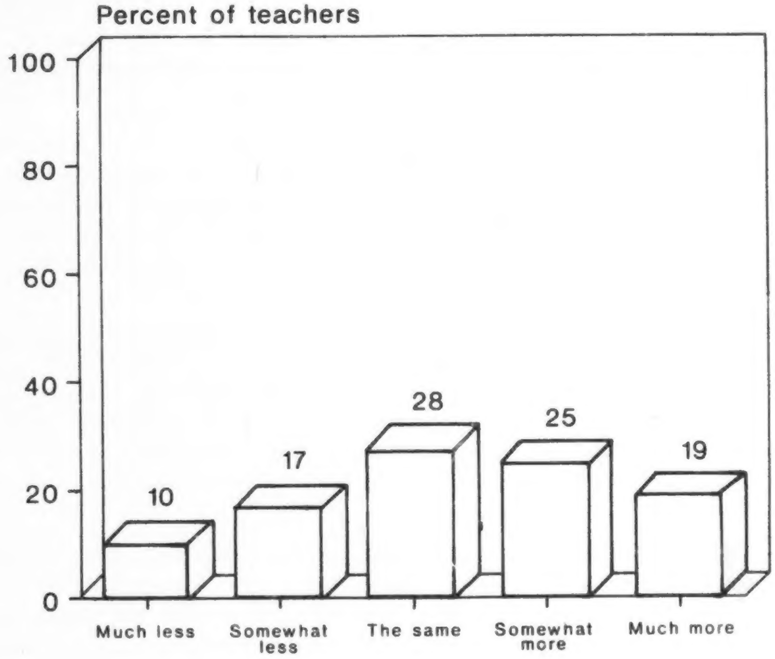
To obtain trend information on public school teachers' assessment of student discipline, findings from this survey were compared with polls conducted earlier in the 1980s by the National Education Association (NEA). Teachers in the 1987 Department of Education survey were considerably more positive about the discipline policies of their schools than their NEA counterparts in 1980. So, while teachers report an increase in disruptive behavior, perhaps they are finding it interferes less with their teaching because stronger discipline policies exist for dealing with it. The table below shows various positive characteristics of school discipline policy and the percent of teachers who said these characteristics described their school.

Year	School discipline policy characteristic				
	In writing	Strict enough	Comprehensive enough	Clear	Consistently applied
			Percent		
1980	69	39	42	60	33
1987	93	66	72	80	50

NOTE: Some caution is needed in interpreting comparisons of U.S. Department of Education survey figures and those of the NEA teacher polls, as the differences may be due in part to methodological variations between the studies.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Public School Teacher Perspectives on School Discipline," *OERI Bulletin*, 1987.

Chart 1:24 Changes in disruptive behavior as reported by teachers: School year ending 1987



SOURCE: National Center for Education Statistics, "Public School Teacher Perspectives on School Discipline," *OERI Bulletin*, 1987.

C. Context: Learning Environment

Indicator 1:25 Student drug and alcohol abuse

- **Cocaine usage among high school seniors dropped significantly in 1988.**
- **While alcohol usage has generally declined since 1979, the rates of usage remain high. In 1988, almost two of every three seniors reported using alcohol in the month preceding the survey.**

Drugs and alcohol interfere with thinking and reduce academic achievement. Neighborhoods near schools are often magnets for drug dealers, who can be students themselves. Crimes of violence may accompany or result from substance abuse. In these circumstances, school effectiveness and the achievement of all students can suffer.

Drug and alcohol abuse, despite its health- and life-threatening consequences, is widespread among American students. Acquaintance with such substances—whether sedatives, hallucinogens, or stimulants—generally begins in adolescence and, increasingly, is beginning at even younger ages. While alcohol and illegal drug use has declined in the 1980s, it remains widespread. For example, by the time they are high school seniors, more than one-half of the students will have tried an illicit substance.

The rise in cocaine usage among students has been particularly dramatic in the last decade or so. In just 4 years, from the class of 1975 to the class of 1979, the proportion of students who reported using cocaine in the previous year doubled, from almost 6 percent to 12 percent. The share of students who ever used cocaine during a 1-year period peaked in 1985 at 13 percent. However, by 1988, this proportion had dropped to less than 8 percent. Similarly, the number of high school seniors who reported using cocaine in the previous 30 days declined from almost 7 percent in 1985 to just over 3 percent in 1988. There is evidence, however, that the inexpensive and highly addictive form of cocaine called "crack" has not followed the general decline in cocaine usage, especially in urban areas and among high school dropouts.*

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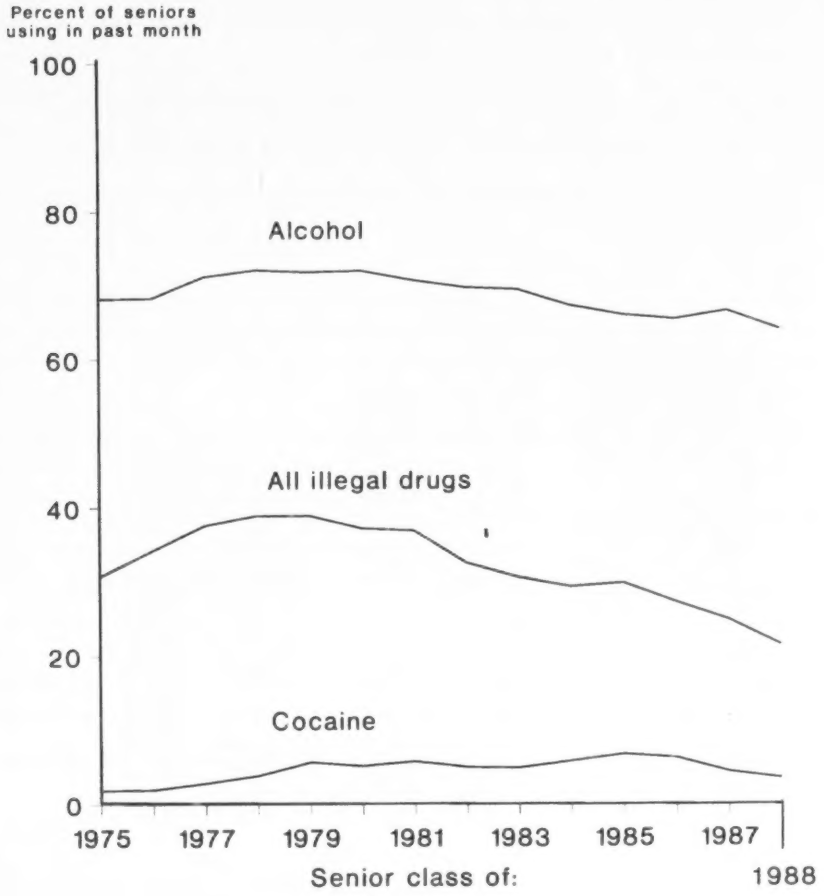
* "Young Adults Show Drop in Cocaine Use," *The New York Times*, January 14, 1988.

SOURCE: U.S. Department of Health and Human Services, Alcohol, Drug Abuse, and Mental Health Administration, National Institute on Drug Abuse, *Drug Use Among American High School Students, College Students, and Other Young Adults*, 1989; see also U.S. Department of Education, *Schools Without Drugs*, 1986.

Chart 1:25 **Trends in the use of drugs and alcohol by high school seniors: 1975–1988**



SOURCE: National Institute on Drug Abuse, *Drug Use Among American High School Students, College Students, and Other Young Adults*, 1989.

C. Context: Learning Environment

Indicator 1:26 Principals' perceptions of school climate and reading performance

- **Students enrolled in schools where the principals rated eight problems [1] as "not a problem" had higher reading scores than students in schools where principals rated them "minor" or "moderate."**
- **High school principals considered problems in their schools to be more serious than elementary school principals, especially in the areas of absenteeism, teacher motivation, low standards for students, and vandalism.**
- **Principals' average ratings indicate that private schools have fewer problems than public schools.**

Educators can contribute to an effective learning environment through strong leadership in emphasizing priorities, such as basic skills and academic success, having high expectations for all students, creating a safe and orderly atmosphere, and involving parents.[2]

Principals were asked to rate eight potential problems in their schools. Students in schools where these factors were rated as "minor" or "moderate" had lower reading scores than students in schools where they were not considered problems. In no school was the principal's rating "serious." The difference in reading scores was significant after taking into account student background characteristics such as race and ethnicity, parental education, and reading materials in the home.

High school principals rated their school problems as more serious than did elementary school principals. Lack of parental interest and lack of discipline were identified as minor or moderate problems in two-thirds of all schools. In 1 out of 10 high schools, student absenteeism and lack of parental interest were rated as "serious."

Principals' average ratings indicate that private schools experience fewer problems than public schools, particularly at the high school level.

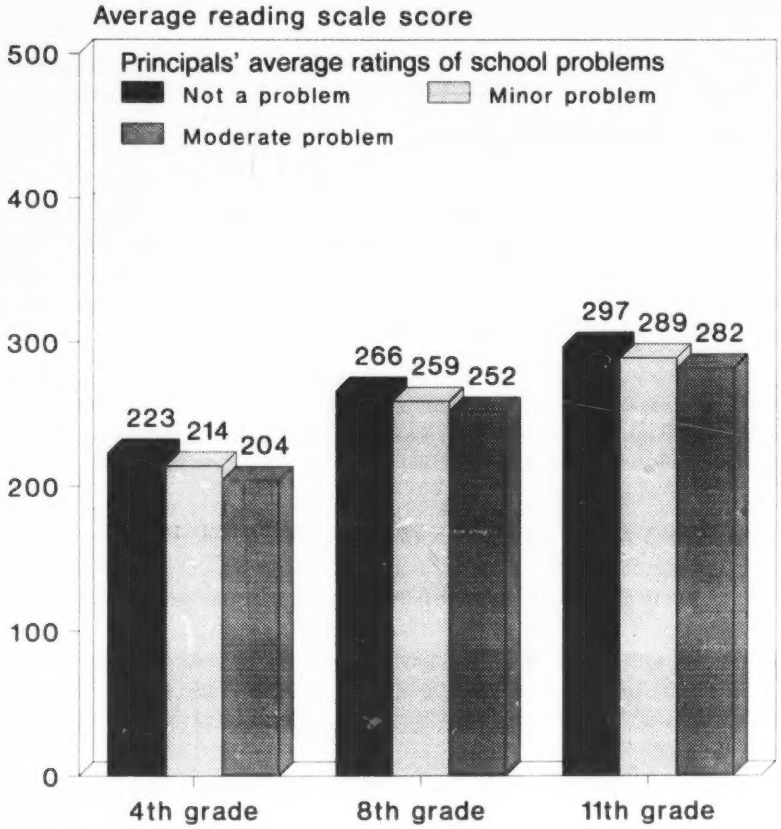
---

[1] The eight problems were student absenteeism, lack of parental interest, lack of discipline, lack of teacher commitment/motivation, teacher absenteeism, teacher turnover, low standards for students, and vandalism.

[2] U.S. Department of Education, Office of Research, *Reaching for Excellence: An Effective Schools Sourcebook*, 1985. See also S.C. Purkey and M.S. Smith, "Effective Schools: A Review," *The Elementary School Journal*, vol. 83 (4) (March 1983): 427–452.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "School Climate and Reading Performance," *Survey Report*, 1988.

Chart 1:26 **Average adjusted reading proficiency, by average rating on school problems and grade: 1984**



NOTE: Reading proficiency scale scores were adjusted for race and ethnicity, language spoken in the home, parental education, and number of reading materials in the home.

SOURCE: National Center for Education Statistics, "School Climate and Reading Performance," *Survey Report*, 1988.

C. Context: Perceptions

Indicator 1:27 Public opinion of public schools

- **The public has consistently rated its own local schools higher than it has rated the public schools nationally.**
- **In 1988, local public schools were rated higher by public school parents than by nonpublic school parents and by people with no children in school.**
- **The public's confidence in schools has not changed significantly since 1984.**

Public schools depend upon public support. Polls of the public's perception of the schools are gauges of the strength of that support. The annual Gallup Poll of the Public's Attitudes Toward the Public Schools provides data on the public's ratings of the schools. This poll has become a barometer, closely watched and debated each year by educators and policymakers.

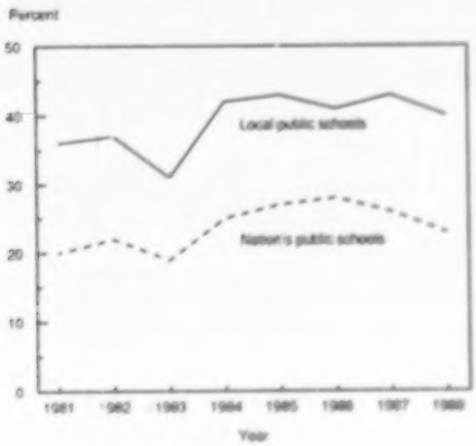
The most recent poll shows that in 1988, the public continued to grade its local schools higher than the Nation's schools as a whole. Local public schools were graded A or B by 40 percent of respondents in 1988, while only 23 percent rated the Nation's public schools A or B. This has changed little since 1984.

In recent years, the Gallup organization has distinguished between ratings by public school parents, nonpublic school parents, and those without children in school. In 1988, parents of children in public schools were more likely to give local public schools an A or B grade (51 percent) than parents of children in nonpublic schools (33 percent) or those with no children in school (37 percent).

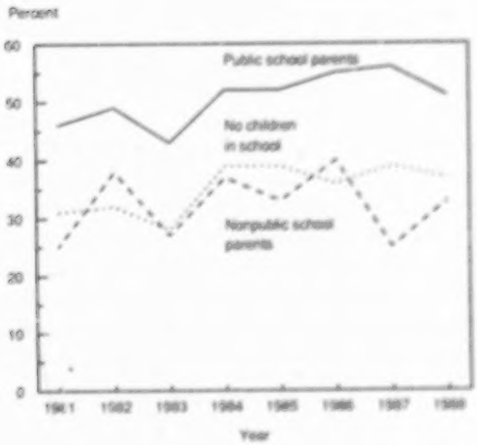
SOURCE: Alec M. Gallup and Stanley M. Elam, "The 20th Annual Gallup Poll of the Public's Attitudes Toward the Public Schools," *Phi Delta Kappan*, September 1988.

Chart 1:27 Ratings of public schools: 1981–1988

Percent of the public grading public schools A or B



Percent of the public grading local public schools
A or B, by type of school involvement



SOURCE: The Gallup Poll, various years.

C. Context: Perceptions

Indicator 1:28 Teachers' perceptions of student problems and education improvement strategies

- **Teachers feel that a major reason students have difficulty in school is because they "are left on their own after school."**
- **Parents, more than teachers, feel that school-initiated policies can improve education.**

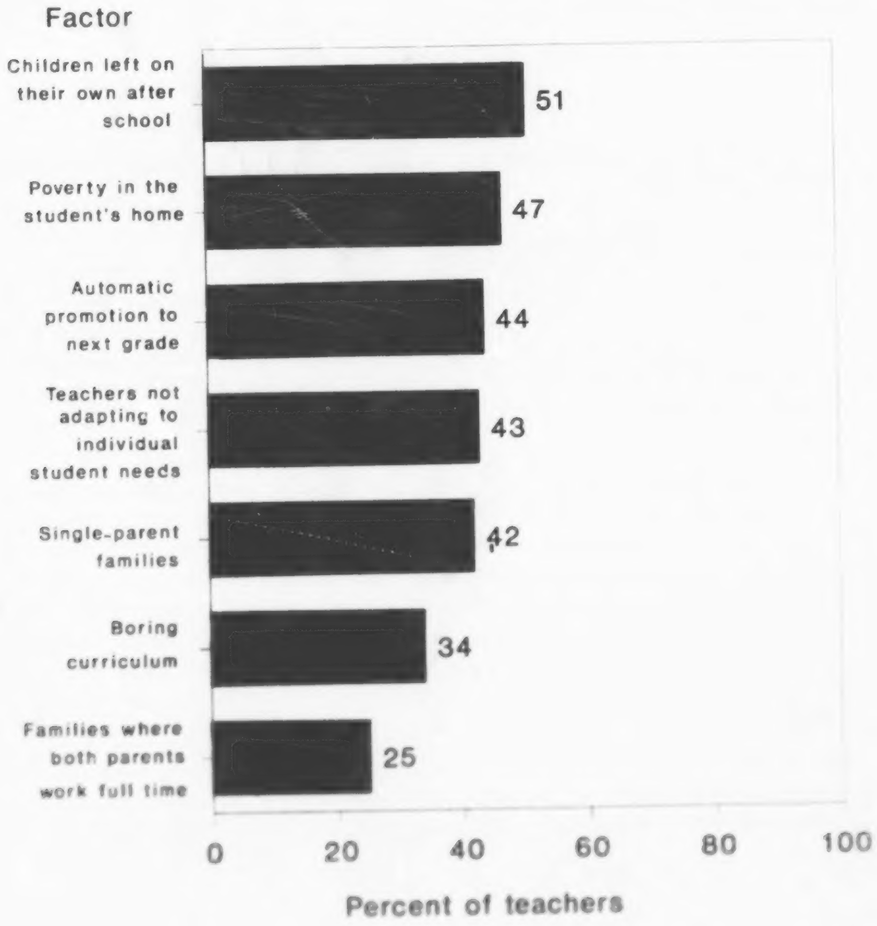
Research has shown that students with behavioral and academic problems could be school dropouts. In a 1987 survey, teachers viewed the phenomenon of "latch-key" children as a major problem. Half of the teachers surveyed felt that "children who are left on their own after school" was a major cause of school difficulties. Poverty in the home was the second most frequently cited cause, but the first most cited by teachers in districts of below average wealth.

Parents and teachers were both asked to rate the extent to which they felt each of seven criticisms of parents was valid. About 60 percent of teachers and parents surveyed felt that "many" or "most" parents leave their children alone too much after school. While 17 percent of parents of public school children surveyed acknowledged that their children are alone after school 1 or 2 days per week, 24 percent said that they are alone almost every day. Parents of black, junior high, and high school students are the most likely to say that their children are on their own almost every day after school, regardless of geographical location, parental income, or education levels.

Most solutions to a student's school problems require cooperation between parents and teachers, whether those solutions are school-initiated or home-based. However, on the extent to which they felt the reform would "help a lot" to improve education, parents and teachers surveyed differed on six of seven possible strategies. Of the six, the four that were school-initiated (such as "having the school notify the parents immediately about any problem involving their child") were favored by parents more than teachers. But teachers overwhelmingly supported one home-based strategy ("having parents spend more time with their children in support of school and teachers"). The sixth strategy ("getting teachers and parents to meet together and talk about school policies") involved both home and school.

SOURCE: *The Metropolitan Life Survey of the American Teacher 1987: Strengthening Links Between Home and School.*

Chart 1:28 Percent of teachers who think that each factor is a "major cause" of students' difficulties in school: 1987



SOURCE: *The Metropolitan Life Survey of the American Teacher 1987: Strengthening Links Between Home and School.*

C. Context: Requirements

Indicator 1:29 State requirements for graduation from high school

- **Approximately 67 percent of the States require the number of English credits and almost 50 percent require the number of social studies credits recommended by the National Commission on Excellence in Education.**
- **About 16 percent of the States require the recommended number of credits in mathematics and 6 percent require this number in science.**
- **A total of 19 States now require the passing of a competency test for high school graduation.**

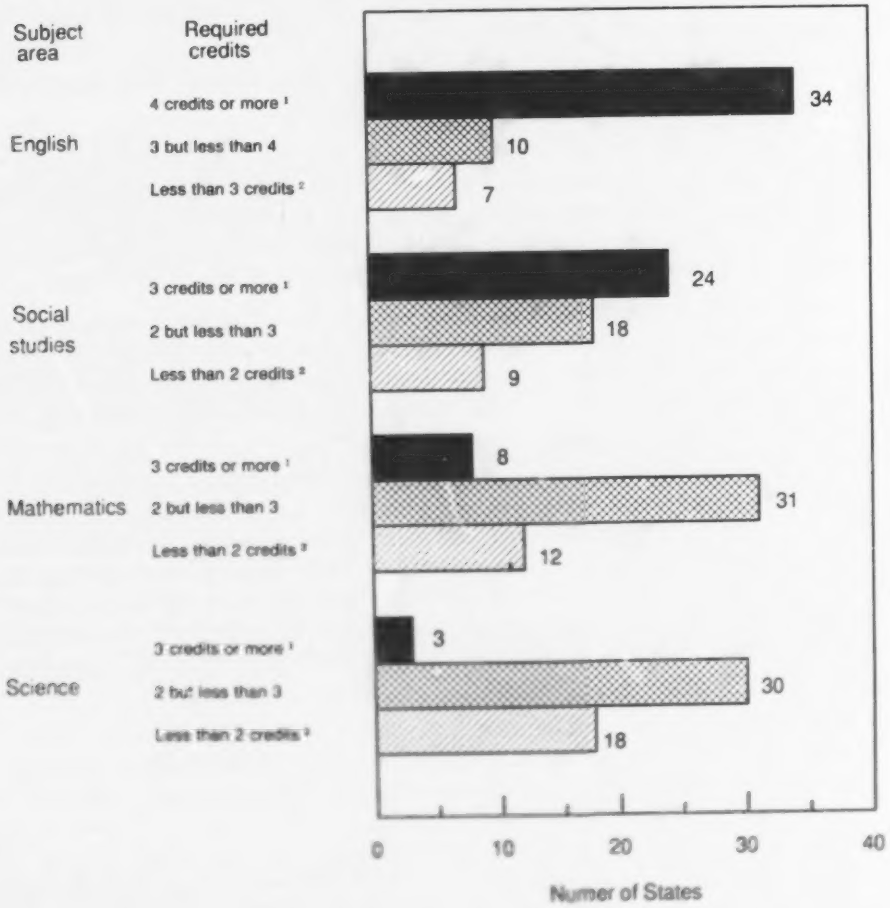
Graduation requirements are a measure of the academic rigor in the curriculum. They identify minimal requirements demanded of all students. Individual students may, and often do, elect a program of studies that exceeds the requirements. For example, college-bound students often complete programs that exceed State requirements. In 1983, the National Commission on Excellence in Education drew attention to this measure of school performance by recommending a minimum of 4 years of English and 3 years each of mathematics, science, and social studies.

The 1980s has seen a movement toward increasing State requirements for graduation. However, despite the movement towards establishing a more rigorous academic curriculum, many States still do not require as many credits as recommended by the National Commission on Excellence in Education. By the 1987–88 academic year, only 34 States required 4 years of English, and only 24 required 3 years of social studies. In the area of mathematics and science, most States required no more than 2 years in each. However, many local school districts require more than their States do, and many students are taking more credits than their States require (see *Indicator 1:8*).

Accompanying the movement to increase course requirements for high school graduation, some States have imposed a competency test that must be passed before a diploma will be granted. A total of 19 States now impose such a test.

SOURCE: Council of Chief State School Officers, 1988 Policies and Practices Questionnaire.

Chart 1:29 Number of course credits required by States for high school graduation, selected subjects: 1988



[1] Number of credits recommended by the National Commission on Excellence in Education.

[2] Includes those States with no requirements in the subject.

SOURCE: Council of Chief State School Officers, 1988 Policies andPractices Questionnaire.

C. Context: Requirements

Indicator 1:30 State requirements for teacher preparation

- **By the fall of 1988, 46 States had enacted some form of competency testing as part of the process of certifying teachers.**
- **Within this group, 32 States require that students take an examination in order to be admitted to a teacher education program.**

States have taken the lead in seeking ways to improve the quality of teachers in elementary and secondary schools. To screen new teacher candidates, most States use some form of competency testing. With these tests, States hope to screen out teaching candidates who are deficient in basic skills and knowledge.

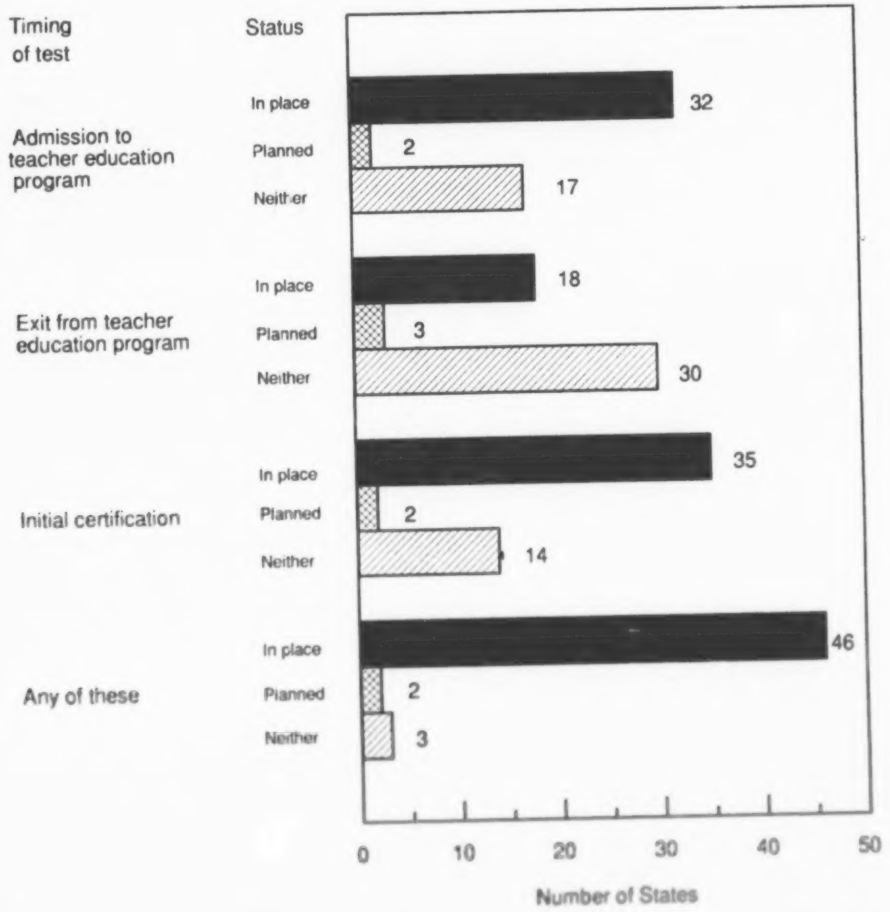
One subject of debate concerns what competency tests should cover. No nationally accepted test exists, so some States use commercially developed tests, and some use tests of their own design, while a few leave the choice of tests up to the colleges or universities. All tests cover basic skills, subject matter, teaching methods, or some combination of these.

There is no agreement on the best time to administer such tests. Some States require a test prior to initial certification, some States test prior to completing a teacher education program, but increasingly States are requiring a test before a student may be admitted to a teacher education program. By 1988, 32 States required a test at this point; two others will have them in place by 1990. A total of 46 States currently require a test at one of these points; two more States will have one or more tests in place by 1990. There are only three States that have neither prescribed tests prior to initial certification nor any planned.

As the National Board for Professional Teaching Standards develops and administers its tests, some standardization may occur. Such standardization would, it is hoped, enable competent teachers to move from one State to another more easily.

SOURCE: Council of Chief State School Officers, 1988 Policies and Practices Questionnaire.

Chart 1:30 Number of States requiring tests prior to initial certification for teaching: 1988



SOURCE: Council of Chief State School Officers, 1988 Policies and Practices Questionnaire.

Tables

Table 1:1-1 Average reading proficiency of students in grades 3, 7, and 11 by selected characteristics: 1986

Characteristic	Average reading proficiency *		
	Grade 3	Grade 7	Grade 11
Total	38.1	48.9	56.1
Race/ethnicity			
White	39.8	50.3	57.3
Black	33.4	45.2	51.5
Hispanic	33.2	44.4	51.3
Region			
Northeast	39.1	50.7	57.4
Southeast	37.2	48.1	54.8
Central	39.3	49.0	56.5
West	36.9	48.0	55.4
Type of community			
Disadvantaged urban	31.9	43.8	51.2
Advantaged urban	41.2	51.6	59.5
Gender			
Male	37.3	47.5	54.5
Female	38.9	50.3	57.7

* The range of the reading proficiency scale is 0 to 100.

SOURCE: National Assessment of Educational Progress, *Who Reads Best? Factors Related to Reading Achievement in Grades 3, 7, and 11*, 1988.

Indicator 1:1

Table 1:1–2 Percent of students at each level of written response to reading tasks, by grade: 1986

Task	Grade 3	Grade 7	Grade 11
		Percent	
Task one (story)			
Inadequate	70.0	36.7	20.8
Minimal	10.7	17.7	15.6
Satisfactory	18.5	38.1	41.3
Elaborated	0.8	7.5	22.3
Task two (social studies)			
No comparison	69.6	36.2	25.6
Unsatisfactory comparison	29.9	60.4	62.9
Minimal comparison	0.5	3.2	9.0
Satisfactory comparison	0.0	0.2	1.6
Elaborated comparison	0.0	0.0	0.9
Task three (story)			
Inadequate	—	16.6	5.8
Minimal	—	18.8	16.4
Satisfactory	—	50.4	58.1
Elaborated	—	14.3	19.7

—Not applicable

SOURCE: National Assessment of Educational Progress, *Who Reads Best? Factors Related to Reading Achievement in Grades 3, 7, and 11*, 1988.

Indicator 1:2

Table 1:2–1 Average mathematics proficiency of 9-, 13-, and 17-year-old students: Selected years 1973–1986

Age	1973 [1]	1978	1982	1986
9	219.1	218.6	219.0	[2] 221.7
13	266.0	264.1	268.6	[2] 269.0
17	304.4	300.4	298.5	[3] 302.0

[1] The 1973 mathematics assessment was not included in the scaling of NAEP trend data. However, a rough estimate of the 1973 mean level of student mathematics proficiency was computed by NAEP.

[2] Statisically significant difference from 1978 at the 0.05 level.

[3] Statisically significant difference from 1982 at the 0.05 level.

SOURCE: National Assessment of Educational Progress, *The Mathematics Report Card: Are We Measuring Up?*, 1988.

Indicator 1:2

Table 1:2-2 **Percent of 9-, 13-, and 17-year-old students at or above the five proficiency levels on the mathematics proficiency scale: 1978, 1982, and 1986**

Proficiency level	Age	1978	1982	1986
			Percent	
Level 150 Simple arithmetic facts	9	96.5	97.2	97.8
	13	99.8	99.9	100.0
	17	100.0	100.0	100.0
Level 200 Beginning skills and understanding	9	70.3	71.5	[1] 73.9
	13	94.5	97.6	[1] 98.5
	17	99.8	99.9	99.9
Level 250 Basic operations and beginning problem solving	9	19.4	18.7	20.8
	13	64.9	71.6	[1] 73.1
	17	92.1	92.9	[2] 96.0
Level 300 Moderately complex procedures and reasoning	9	0.8	0.6	0.6
	13	17.9	17.8	15.9
	17	51.4	48.3	51.1
Level 350 Multistep problem solving and algebra	9	0.0	0.0	0.0
	13	0.9	0.5	0.4
	17	7.4	5.4	6.4

[1] Statistically significant difference from 1978 at the 0.05 level.

[2] Statistically significant difference from 1978 and 1982 at the 0.05 level.

SOURCE: National Assessment of Educational Progress, *The Mathematics Report Card: Are We Measuring Up?*, 1988.

Indicator 1:3

Table 1:3–1 Average mathematics proficiency of 13-year-old students in six countries: 1988

Group	Country/province	Proficiency level
1	Korea	567.8
2	Quebec (French)	543.0
	British Columbia	539.8
	Quebec (English)	535.8
	New Brunswick (English)	529.0
3	Ontario (English)	516.1
	New Brunswick (French)	514.2
	Spain	511.7
	United Kingdom	509.9
	Ireland	504.3
4	Ontario (French)	481.5
	United States	473.9

NOTE: Differences in performance between the four groups are statistically significant at the 0.05 level; differences in performance within groups are not statistically significant.

SOURCE: International Assessment of Educational Progress, *A World of Differences, An International Assessment of Mathematics and Science*, 1989.

Table 1:3–2 **Percentages of 13-year-old students in six countries performing at or above each level of the mathematics proficiency scale: 1988**

Country/province	300 (Add and subtract)	400 (Simple problems)	500 (Two-step problems)	600 (Understand concepts)	700 (Interpret data)
Korea	100	95	78	40	5
Quebec (French)	100	97	73	22	2
British Columbia	100	95	69	24	2
Quebec (English)	100	97	67	20	1
New Brunswick (English)	100	95	65	18	1
Ontario (English)	99	92	58	16	1
New Brunswick (French)	100	95	58	12	<1
Spain	99	91	57	14	1
United Kingdom	98	87	55	18	2
Ireland	98	86	55	14	<1
Ontario (French)	99	85	40	7	0
United States	97	78	40	9	1

SOURCE: International Assessment of Educational Progress, *A World of Differences, International Assessment of Mathematics and Science*, 1989.

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Indicator 1:4

Table 1:4–1 National trends in average science proficiency: Selected years 1970–1986

Age of student	1970	1973	1977	1982	1986
9	224.9	220.3	219.9	220.9	[1] 224.3
13	254.9	249.5	247.4	250.2	251.4
17	304.8	295.8	289.6	283.3	[2] 288.5

[1] Statistically significant difference from 1977 at the 0.05 level.

[2] Statistically significant difference from 1982 at the 0.05 level.

NOTE: While 9- and 13-year-olds were assessed in the spring of 1970, 17-year-olds were assessed in the spring of 1969.

SOURCE: National Assessment of Educational Progress, *The Science Report Card, Elements of Risk and Recovery*, 1988.

Table 1:4–2 **Percent of 9-, 13-, and 17-year-old students at or above the five science proficiency levels: 1977, 1982, and 1986**

Proficiency level	Age	1977	1982	1986
Level 150	9	93.6	95.0	[1] 96.3
Knows everyday	13	98.6	99.6	99.8
science facts	17	99.8	99.7	99.9
Level 200	9	67.9	70.4	[1] 71.4
Understands simple	13	85.9	89.6	[1] 91.8
scientific principles	17	97.2	95.8	96.7
Level 250	9	26.2	24.8	27.6
Applies basic	13	49.2	51.5	[1] 53.4
scientific information	17	81.8	76.8	[2] 80.8
Level 300	9	3.5	2.2	3.4
Analyzes scientific	13	10.9	9.4	9.4
procedures and data	17	41.7	37.5	[2] 41.4
Level 350	9	0.0	0.1	0.1
Integrates specialized	13	0.7	0.4	0.2
scientific information	17	8.5	7.2	7.5

[1] Statistically significant difference from 1977 at the 0.05 level.

[2] Statistically significant difference from 1982 at the 0.05 level.

NOTE: No significance test is reported when the proportion is either >95.0 or <5.0.

SOURCE: National Assessment of Educational Progress, *The Science Report Card, Elements of Risk and Recovery*, 1988.

Indicator 1:5

Table 1:5–1 Average science proficiency of 13-year-old students in six countries: 1988

Group	Country/province	Proficiency level
1	British Columbia	551.3
	Korea	549.9
2	United Kingdom	519.5
	Quebec (English)	515.3
	Ontario (English)	514.7
	Quebec (French)	513.4
	New Brunswick (English)	510.5
	Spain	503.9
3	United States	478.5
	Ireland	469.3
	Ontario (French)	468.3
	New Brunswick (French)	468.1

NOTE: Differences in performance between the three groups are statistically significant at the 0.05 level; differences in performance within groups are not statistically significant.

SOURCE: International Assessment of Educational Progress, *A World of Differences, An International Assessment of Mathematics and Science*, 1989.

Table 1:5–2 Percentage of 13-year-old students in six countries performing at or above each level of the science proficiency scale: 1988

Country/province	300 (Know everyday facts)	400 (Apply simple principles)	500 (Analyze experiments)	600 (Apply intermediate principles)	700 (Integrate experimental evidence)
British Columbia	100	95	72	31	4
Korea	100	93	73	33	2
United Kingdom	98	89	59	21	2
Quebec (English)	99	92	57	15	1
Ontario (English)	99	91	56	17	2
Quebec (French)	100	91	56	15	1
New Brunswick (English)	99	90	55	15	1
Spain	99	88	53	12	1
United States	96	78	42	12	1
Ireland	96	76	37	9	1
Ontario (French)	98	79	35	6	<1
New Brunswick (French)	98	78	35	7	<1

SOURCE: International Assessment of Educational Progress, *A World of Differences, An International Assessment of Mathematics and Science*, 1989.

Indicator 1:6

Table 1:6–1 U.S. history item responses: 1986

More than 80 percent answered correctly:	Percent correct
Thomas Edison invented the light bulb	95.2
Location of the Soviet Union on a map	92.1
Alexander Graham Bell invented the telephone	91.1
George Washington was President between 1780 and 1800	87.9
Location of Italy on a map	87.7
The Underground Railroad was a network for helping slaves escape	87.5
Adolph Hitler was the leader of Germany when the U.S. entered World War II	87.4
Thomas Jefferson was the primary author of the Declaration of Independence	87.4
The assembly line was introduced in the U.S. automobile industry	87.2
Location of the area representing the 13 original States on a map	84.8
The Ku Klux Klan used violence to oppose equality for minorities	83.9
Harriet Tubman was a leader in helping slaves escape to the North	83.8
Bill of Rights guarantees freedom of speech and religion	81.3
Location of the Rocky Mountains on a map	81.3
The Japanese attack on Pearl Harbor led the U.S. into World War II	80.0

Less than 30 percent answered correctly:	Percent correct
Andrew Jackson was President between 1820 and 1840	29.9
The Reformation led to the establishment of Protestant groups	29.8
The United Nations was founded between 1934 and 1947	25.9
The Seneca Falls Declaration was concerned with women's rights	25.8
Abraham Lincoln was President between 1860 and 1880	24.7
Medicare and the Voting Act were passed under Lyndon Johnson's Great Society	23.9
Betty Friedan and Gloria Steinem are leaders in the women's movement	22.8
Progressive movement refers to the period after World War I	22.6
Reconstruction refers to the readmission of the Confederate States	21.4
John Winthrop and the Puritans founded a colony at Boston	19.5

SOURCE: National Assessment of Educational Progress, *Literature and U.S. History: The Instructional Experience and Factual Knowledge of High School Juniors*, 1987.

Table 1:6–2 Literature item responses: 1986

More than 80 percent answered correctly:	Percent correct
Noah gathered pairs of creatures onto the ark	94.0
Moses led the people out of Egypt and gave the 10 Commandments	92.3
Romeo and Juliet's love was hindered by their feuding families	89.7
"I have a dream ..." is from a speech by Martin Luther King, Jr.	88.1
Hamlet said "To be or not to be: that is the question."	87.8
In *A Christmas Carol*, Ebenezer Scrooge became generous	87.2
Zeus was the ruler of the gods in Greek mythology	86.7
The White Rabbit and Mad Hatter are characters in *Alice in Wonderland*	86.1
Robin Hood was known for stealing from the rich to give to the poor	85.7
Cinderella's rags turned into a gown and she met a prince	85.1
"The Lord is my shepherd ..." is from Psalm 23	82.4
Huckleberry Finn is about an orphaned boy and a runaway slave	80.5
Merlin was the magician in the legend of King Arthur	80.5

Less than 30 percent answered correctly:	Percent correct
D.H. Lawrence wrote "The Rocking Horse Winner," *Sons and Lovers*	28.7
Willa Cather wrote *My Antonia, Death Comes for the Archbishop*	28.2
Tennessee Williams wrote *A Streetcar Named Desire*	27.6
Ernest Hemingway wrote "In Another Country," "The Killers"	27.3
Thomas Hardy wrote *Return of the Native*	24.4
In *Catcher in the Rye*, a 16-year-old boy goes to New York	22.5
Henry James wrote about American compared to European lives	21.9
Henrik Ibsen wrote *Hedda Gabbler, A Doll's House*	20.3
Joseph Conrad wrote *Heart of Darkness*	19.3
Invisible Man describes a young man's move to Harlem	18.3
Fyodor Dostoevski wrote *Crime and Punishment*	17.1
James Joyce is the author of *Ulysses* and *A Portrait of the Artist as a Young Man*	15.6
De Tocqueville wrote about what he saw in *Democracy in America*	15.5
Eudora Welty and Flannery O'Connor are known for stories set in the American South	14.4
The animal referred to in William Blake's poem is a tiger	13.6
The Pilgrim's Progress is an allegory about Christians	13.4

SOURCE: National Assessment of Educational Progress, *Literature and U.S. History: The Instructional Experience and Factual Knowledge of High School Juniors*, 1987.

Table 1:6–3 Average proficiency on the U.S. history and literature scales of high school juniors, by selected characteristics: 1986

Selected characteristics	History	Literature
	Average scores *	
Total	285.0	285.0
Race/ethnicity		
White	290.8	289.9
Black	263.1	267.5
Hispanic	262.5	264.8
Gender		
Male	290.7	282.8
Female	279.0	287.3
Region		
Northeast	293.8	293.0
Southeast	278.4	282.6
Central	286.8	284.3
West	280.2	280.4
Size/type of community		
Rural	275.1	273.7
Urban disadvantaged	262.0	265.2
Urban advantaged	301.1	301.4
School program		
Academic	298.8	298.7
General	271.4	271.7
Vocational/technical	266.3	265.9
Parents' level of education		
No high school diploma	260.8	266.2
Graduated high school	273.8	273.4
Post high school	289.7	288.3
Graduated college	297.7	297.6
Reading materials in the home		
0–3 types	265.1	265.4
4 types	279.6	279.3
5 types	291.6	291.7

* The history and literature scales range from 0 to 500.

SOURCE: National Assessment of Educational Progress, *Literature and U.S. History: The Instructional Experience and Factual Knowledge of High School Juniors*, 1987.

Indicator 1:7

Table 1:7-1 Overall computer competence scores for students in grades 3, 7, and 11: School year ending 1986

Grade assessed	Number of items	Grade level		
		3	7	11
		Mean percent correct		
Grade 3	59	33.7	—	—
Grade 7	131	—	41.2	—
Grade 11	125	—	—	46.2
Grades 3 and 7	44	33.9	48.3	—
Grades 7 and 11	65	—	48.9	57.9
Grades 3, 7, 11	26	38.7	55.2	64.8

—Not applicable

NOTE: Scores do not have equivalent meanings across grade levels.

SOURCE: National Assessment of Educational Progress, *Computer Competence: The First National Assessment*, 1988.

Table 1:7–2 **Computer competence scores for students in grades 3, 7, and 11, by computer use, study, or ownership: School year ending 1986**

Type of experience	Grade level		
	3	7	11
	Mean percent correct		
Have used a computer			
Yes	34.6	42.2	47.6
No	30.8	34.0	37.4
Are currently studying computers			
Yes	34.8	44.1	52.8
No	32.6	39.5	45.1
Family owns a computer			
Yes	36.4	46.1	52.7
No	32.5	38.9	43.5

NOTE: Scores do not have equivalent meanings across grade levels.

SOURCE: National Assessment of Educational Progress, *Computer Competence: The First National Assessment*, 1988.

Table 1:7–3 Computer competence scores for students in grades 7 and 11, by home and school experience: School year ending 1986

Family ownership/ study status	Grade level	
	7	11
	Mean percent correct	
Owns, is studying	37.2	48.5
Owns, is not studying	35.5	44.2
Does not own, is studying	33.8	41.5
Does not own, is not studying	31.4	37.4

NOTE: Scores do not have equivalent meanings across grade levels.

SOURCE: National Assessment of Educational Progress, *Computer Competence: The First National Assessment*, 1988.

Indicator 1:8

Table 1:8-1 Percent of high school graduates earning recommended credits in "new basics," by racial/ethnic category: 1982 and 1987

Racial/ethnic category of students	1982	1987	Percent change 1982 to 1987
All students	13.4	28.6	* 15.2
White	14.9	29.7	* 14.8
Black	10.1	24.3	* 14.2
Hispanic	6.3	17.9	* 11.6
Asian	21.0	48.3	* 27.3
Other	5.9	28.9	* 23.0

* Difference between 1982 and 1987 graduates is significant at the $p < 0.05$ level.

NOTE: In this table "new basics" includes 4 years of English and 3 years each of social studies, mathematics, and science.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987 High School Transcript Study, unpublished tabulations.

Indicator 1:9

Table 1:9-1 High school completion rates of persons aged 18–19 and 20–24, by race and Hispanic origin: 1974–1986

Year	Age 18–19				Age 20–24			
	Total	White	Black	Hispanic *	Total	White	Black	Hispanic *
	Percentage of age group				Percentage of age group			
1974	73.4	76.2	55.8	48.9	83.9	85.6	72.5	59.0
1975	73.7	77.0	52.8	50.0	83.9	85.9	70.5	61.3
1976	73.1	75.4	58.2	50.9	83.7	85.4	71.9	58.0
1977	72.9	75.7	54.9	50.7	83.7	85.1	73.4	56.6
1978	73.5	76.3	54.9	48.9	83.7	85.2	73.5	58.7
1979	72.8	75.3	56.4	53.7	83.2	84.9	71.8	55.8
1980	73.7	76.1	59.3	46.1	83.8	85.1	74.3	57.1
1981	72.5	74.8	59.6	47.2	83.7	85.0	75.7	59.3
1982	72.0	74.5	58.2	51.7	84.1	85.4	76.2	60.2
1983	72.7	75.6	59.1	50.3	83.3	84.6	75.8	56.6
1984	73.3	75.5	63.0	58.3	84.6	85.7	79.3	60.7
1985	74.6	76.7	62.8	49.8	85.3	86.0	80.8	67.4
1986	74.6	76.6	64.9	54.7	84.8	85.4	81.0	61.6

* Most of the year-to-year differences in completion rates for Hispanics are not statistically significant due to the small size of the Hispanic sample. Hispanics may be of any race.

NOTE: Separate analyses were not done for Asians because they are not identifiable from the October Current Population Survey data tapes.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "School Enrollment—Social and Economic Characteristics of Students, October [various years]," *Current Population Reports*, Series P-20; and unpublished tabulations.

Indicator 1:9

Table 1:9–2 High school completion rates of persons aged 25–34, by race and Hispanic origin: 1974–1986

Year	Total	White	Black	Hispanic *
		Percentage of age group		
1974	81.1	82.6	68.4	49.2
1975	81.9	83.6	67.5	53.4
1976	82.3	83.6	71.4	51.5
1977	83.6	84.9	72.0	56.2
1978	84.6	85.9	74.4	55.0
1979	85.0	86.3	74.7	54.3
1980	85.4	86.7	76.4	56.1
1981	85.9	86.8	78.6	54.9
1982	86.3	87.3	79.7	56.6
1983	86.7	87.6	80.2	57.5
1984	86.8	87.9	79.9	58.9
1985	86.3	87.2	80.7	59.4
1986	86.5	87.4	80.1	60.0

* Hispanics may be of any race.

NOTE: For any given year, 18- to 19-, 20- to 24-, and 25- to 34-year-olds represent different groups of people. Therefore, these tables should be used with caution when attempting to make inferences about the completion rates of a specific group as it ages. Separate analyses were not done for Asians because they are not identifiable from October Current Population Survey data tapes.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "School Enrollment—Social and Economic Characteristics of Students, October [various years]," *Current Population Reports*, Series P-20.

Indicator 1:10

Table 1:10–1 Scholastic Aptitude Test (SAT) scores: School years ending 1963–1988

School year * ending	Total	Verbal	Math	School year * ending	Total	Verbal	Math
	Average test scores				Average test scores		
1963	980	478	502	1976	903	431	472
1964	973	475	498	1977	899	429	470
1965	969	473	496	1978	897	429	468
1966	967	471	496	1979	894	427	467
1967	958	466	492	1980	890	424	466
1968	958	466	492	1981	890	424	466
1969	956	463	493	1982	893	426	467
1970	948	460	488	1983	893	425	468
1971	943	455	488	1984	897	426	471
1972	937	453	484	1985	906	431	475
1973	926	445	481	1986	906	431	475
1974	924	444	480	1987	906	430	476
1975	906	434	472	1988	904	428	476

* Averages for 1972 through 1988 are based on college-bound seniors. Averages for 1963 through 1971 are estimates provided by the College Board; background information needed for specific identification of college-bound seniors was not collected before 1972.

SOURCE: College Entrance Examination Board, *National Report: College-Bound Seniors*, various years (copyright by College Entrance Examination Board, all rights reserved).

Table 1:10-2 American College Testing (ACT) scores: School years ending 1970–1988

School year ending	Composite	English	Mathematics	Social studies	Natural sciences
			Average test scores (men and women)		
1970	19.9	18.5	20.0	19.7	20.8
1971	19.2	18.0	19.1	18.7	20.5
1972	19.1	17.9	18.8	18.6	20.6
1973	19.2	18.1	19.1	18.3	20.8
1974	18.9	17.9	18.3	18.1	20.8
1975	18.6	17.7	17.6	17.4	21.1
1976	18.3	17.5	17.5	17.0	20.8
1977	18.4	17.7	17.4	17.3	20.9
1978	18.5	17.9	17.5	17.1	20.9
1979	18.6	17.9	17.5	17.2	21.1
1980	18.5	17.9	17.4	17.2	21.1
1981	18.5	17.8	17.3	17.2	21.0
1982	18.4	17.9	17.2	17.3	20.8
1983	18.3	17.8	16.9	17.1	20.9
1984	18.5	18.1	17.3	17.3	21.0
1985	18.6	18.1	17.2	17.4	21.2
1986	18.8	18.5	17.3	17.6	21.4
1987	18.7	18.4	17.2	17.5	21.4
1988	18.8	18.5	17.2	17.4	21.4

SOURCE: The American College Testing Program, *The High School Profile Report, Normative Data*, various years.

Table 1:10-3 American College Testing (ACT) scores, by gender: School years ending 1974–1988

School year ending	Composite	English	Mathematics	Social studies	Nautral sciences
			Average test scores (men)		
1974	19.7	17.1	19.7	19.1	22.2
1975	19.5	17.1	19.3	18.7	22.4
1976	19.1	16.8	19.2	17.9	22.0
1977	19.2	17.0	18.9	18.2	22.3
1978	19.3	17.4	19.1	18.0	22.3
1979	19.3	17.4	19.1	18.1	22.3
1980	19.3	17.3	18.9	18.2	22.4
1981	19.3	17.3	18.9	18.3	22.3
1982	19.2	17.3	18.6	18.1	22.2
1983	19.1	17.3	18.4	18.0	22.4
1984	19.3	17.5	18.6	18.1	22.4
1985	19.4	17.6	18.6	18.3	22.6
1986	19.6	17.9	18.8	18.6	22.7
1987	19.5	17.9	18.6	18.4	22.8
1988	19.6	18.0	18.4	18.4	22.8
			Average test scores (women)		
1974	18.2	18.6	17.1	17.3	19.6
1975	17.8	18.3	16.2	16.4	20.0
1976	17.6	18.0	16.0	16.2	19.7
1977	17.8	18.2	16.1	16.5	19.6
1978	17.8	18.3	16.2	16.4	19.8
1979	17.9	18.4	16.2	16.4	20.2
1980	17.9	18.3	16.2	16.4	20.0
1981	17.8	18.2	16.0	16.4	20.0
1982	17.8	18.4	16.0	16.6	19.7
1983	17.6	18.2	15.7	16.4	19.6
1984	17.9	18.6	16.1	16.5	19.9
1985	17.9	18.6	16.0	16.6	20.0
1986	18.1	18.9	16.0	16.9	20.2
1987	18.1	18.9	16.1	16.7	20.1
1988	18.1	19.0	16.1	16.6	20.2

SOURCE: The American College Testing Program, *The High School Profile Report, Normative Data*, various years.

Indicator 1:11

Table 1:11-1 Scholastic Aptitude Test (SAT) scores, by control of high school: Selected school years ending 1982–1988

School year ending and control	Verbal	Math
	Mean test scores	
1982		
Public	426	470
Private	440	471
1983		
Public	425	471
Private	439	472
1984		
Public	427	474
Private	441	475
1985		
Public	431	478
Private	446	479
1987		
Public	428	476
Religiously affiliated	440	469
Independent	473	519
1988		
Public	426	476
Religiously affiliated	440	470
Independent	470	517

NOTE: Data not available for 1986.

SOURCE: The College Entrance Examination Board. *The National Report of College-Bound Seniors, Profile of SAT and Achievement Test Takers*, various years.

Indicator 1:12

Table 1:12–1 Unemployment rates of high school graduates and dropouts, aged 20–24, by race and ethnicity and gender: March 1983–March 1988

Characteristic	1983	1984	1985	1986	1987	1988
All aged 20–24						
Graduates	17.6	12.9	12.6	13.1	10.7	10.7
Dropouts	31.5	26.6	25.1	23.7	22.7	20.5
White						
Graduates	15.0	10.7	10.4	10.7	9.0	8.6
Dropouts	27.6	22.5	22.4	19.7	17.0	16.7
Black						
Graduates	33.6	27.7	26.4	28.2	21.8	24.0
Dropouts	48.4	50.8	42.7	43.7	49.5	38.3
Hispanic						
Graduates	18.9	11.4	12.0	11.5	11.3	10.6
Dropouts	30.5	25.7	18.0	16.3	15.8	14.1
Male						
Graduates	19.3	13.6	13.0	13.6	11.0	10.4
Dropouts	32.1	26.3	25.1	23.8	22.7	18.8
Female						
Graduates	15.6	12.1	12.1	12.4	10.4	11.1
Dropouts	30.1	27.1	25.1	23.6	22.8	23.8

NOTE: Dropouts are those who are identified as completing 1–3 years of high school.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, "Educational Attainment of Workers, March [various years]."

Indicator 1:13

Table 1:13–1 Revenue sources for public elementary and secondary schools: Selected school years ending 1920–1987

School year ending	Total revenues [1]	Sources		
		Local [2]	State	Federal
		Percent of total		
1920	$ 970,121	83.2	16.5	0.3
1930	2,088,557	82.7	16.9	0.4
1940	2,260,527	68.0	30.3	1.8
1950	5,437,044	57.3	39.8	2.9
1960	14,746,618	56.5	39.1	4.4
1970	40,266,923	52.1	39.9	8.0
1971	44,511,292	52.5	39.1	8.4
1972	50,003,645	52.8	38.3	8.9
1973	52,117,930	51.3	40.0	8.7
1974	58,230,892	50.1	41.4	8.5
1975	64,445,239	48.8	42.2	9.0
1976	71,206,073	46.5	44.6	8.9
1977	75,322,532	47.8	43.4	8.8
1978	81,443,160	47.6	43.0	9.4
1979	87,994,143	44.6	45.6	9.8
1980	96,881,165	43.4	46.8	9.8
1981	105,949,087	43.4	47.4	9.2
1982	110,191,257	45.0	47.6	7.4
1983	117,497,502	45.0	47.9	7.1
1984	126,055,419	45.4	47.8	6.8
1985	137,294,678	44.4	48.9	6.6
1986 [3]	149,127,779	43.9	49.4	6.7
1987 [3]	158,827,473	43.9	49.8	6.4

[1] In thousands of current dollars.

[2] Includes intermediate sources.

[3] Revised from previously published figures.

NOTE: Percents may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on Common Core of Data survey and its predecessors).

Indicator 1:14

Table 1:14–1 Expenditure per pupil in average daily attendance in public elementary and secondary schools: Selected school years ending 1950–1988

School year ending	Current dollars		Constant 1986-87 [1] dollars	
	Total expenditure per pupil [2]	Current expenditure per pupil [3]	Total expenditure per pupil [2]	Current expenditure per pupil [3]
1950	$ 259	$ 209	$ 1,216	$ 982
1952	313	244	1,325	1,033
1954	351	265	1,452	1,096
1956	388	294	1,605	1,216
1958	449	341	1,749	1,328
1960	472	375	1,787	1,420
1962	530	419	1,961	1,551
1964	559	460	2,016	1,659
1966	654	537	2,280	1,872
1968	786	658	2,571	2,152
1970	955	816	2,812	2,403
1972	1,128	990	3,049	2,676
1974	1,364	1,207	3,254	2,880
1976	1,697	1,504	3,404	3,017
1977	1,816	1,638	3,442	3,104
1978	2,002	1,823	3,555	3,237
1979	2,210	2,021	3,589	3,282
1980	2,491	2,272	3,569	3,255
1981	[4] 2,762	2,502	[4] 3,547	3,213
1982	[4] 2,997	2,726	[4] 3,542	3,222
1983	[4] 3,230	2,955	[4] 3,661	3,349
1984	[4] 3,500	3,173	[4] 3,825	3,467
1985	[4] 3,760	3,470	[4] 3,954	3,649
1986	[4] 4,070	3,756	[4] 4,160	3,839
1987	[4] 4,365	3,977	[4] 4,365	3,977
1988	[4] 4,645	—	[4] 4,460	—

—Data not available.

[1] Based on the Consumer Price Index, prepared by the Bureau of Labor Statistics, U.S. Department of Labor, and adjusted to a school-year basis.

[2] Total expenditure includes all current expenditures, capital outlay, and interest on school debt.

[3] Current expenditure includes expenditures for operating local public schools, excluding capital outlay, and interest on debt.

[4] Estimated.

NOTE: Some data revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of State School Systems* and *Revenues and Expenditures for Public Elementary and Secondary Education*, various years; and Common Core of Data survey and unpublished data.

Table 1:14–2 Current expenditure per pupil in average daily attendance in public elementary and secondary schools, by State: School years ending 1970 and 1987

(Amounts in 1986–87 dollars)

State	1970	1987	Percent increase	State	1970	1987	Percent increase
United States	**$2,403**	**$3,977**	**65.5**	Missouri	$2,086	$3,472	66.3
Alabama	1,602	2,573	60.6	Montana	2,303	4,194	82.1
Alaska	3,307	8,010	142.2	Nebraska	2,167	3,756	73.3
Arizona	2,120	3,544	67.2	Nevada	2,264	3,573	57.8
Arkansas	1,673	2,733	63.4	New Hampshire	2,129	3,933	84.7
California *	2,553	3,728	46.0	New Jersey	2,992	5,953	99.0
Colorado	2,173	4,147	90.8	New Mexico	2,082	3,558	70.9
Connecticut	2,800	5,435	94.1	New York	3,907	6,497	66.3
Delaware	2,650	4,825	82.1	North Carolina	1,802	3,129	73.6
Dist. of Columbia	2,998	5,742	91.5	North Dakota	2,032	3,437	69.1
Florida	2,155	3,794	76.1	Ohio	2,150	3,671	70.7
Georgia	1,731	3,374	94.9	Oklahoma	1,779	3,099	74.2
Hawaii	2,476	3,787	52.9	Oregon	2,724	4,337	59.2
Idaho	1,776	2,585	45.6	Pennsylvania	2,597	4,616	77.7
Illinois	2,677	4,106	53.4	Rhode Island	2,624	4,985	90.0
Indiana	2,144	3,556	65.9	South Carolina	1,805	3,237	79.3
Iowa	2,485	3,808	53.2	South Dakota	2,032	3,097	52.4
Kansas	2,270	3,933	73.3	Tennessee	1,667	2,827	69.6
Kentucky	1,605	2,733	70.3	Texas	1,837	3,409	85.6
Louisiana	1,908	3,069	60.8	Utah	1,843	2,415	31.0
Maine	2,038	3,850	88.9	Vermont	2,376	4,399	85.1
Maryland	2,703	4,777	76.7	Virginia	2,085	3,780	81.3
Massachusetts	2,529	5,145	103.4	Washington	2,694	3,964	47.1
Michigan	2,662	4,353	63.5	West Virginia	1,973	3,784	91.8
Minnesota	2,662	4,180	57.0	Wisconsin	2,600	4,523	74.0
Mississippi	1,475	2,350	59.3	Wyoming	2,521	5,201	106.3

* Estimated by the National Center for Education Statistics.

NOTE: 1986–87 dollars are based on the Consumer Price Index, prepared by the Bureau of Labor Statistics, U.S. Department of Labor. These data do not reflect differences in inflation rates from State to State.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of State School Systems*; and Common Core of Data survey, special tabulations.

Indicator 1:15

Table 1:15–1 National index of public school revenues per pupil in relation to per capita income: Selected school years ending 1940–1988

School year ending	National index	Total education revenues [1] (billions)	Public elementary and secondary enrollment (millions)	Revenues [1] per pupil	Total personal income [1] (billions)	Total population (millions)	Per capita personal income [1]
1940	16.5	$ 2.3	$ 25.4	$ 91	$ 72.1	$131.0	$ 550
1950	15.5	5.4	25.1	215	206.4	149.2	1,383
1960	18.4	14.7	36.1	407	390.7	177.1	2,206
1970	23.2	40.3	45.6	884	772.9	202.7	3,813
1980	25.8	96.9	41.6	2,329	2,034.0	225.1	9,036
1981	26.1	105.9	41.0	2,583	2,258.5	227.8	9,914
1982	25.1	110.2	40.1	2,748	2,520.9	230.2	10,951
1983	25.8	117.5	39.7	2,960	2,670.8	232.5	11,487
1984	26.5	126.1	39.4	3,201	2,838.6	234.8	12,089
1985	26.7	137.4	39.3	3,496	3,108.7	237.1	13,111
1986	27.2	149.1	39.5	3,775	3,325.3	239.3	13,896
1987	27.3	158.8	39.8	3,990	3,531.1	241.7	14,609
1988	[2] 27.1	[2] 168.1	40.0	[2] 4,203	3,780.0	243.9	15,498

[1] In current dollars.

[2] Estimated.

NOTE: Data have been substantially revised from previously published figures. Beginning in 1960, data include Alaska and Hawaii.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on Common Core of Data surveys, various years); and unpublished data. Bureau of Economic Analysis, *State Personal Income: 1929–82*, 1984, and *Regional Economic Information System*, August 1987.

Table 1:15–2 State indices of public school revenues per pupil in relation to per capita income: School years ending 1980 and 1987

State	State index		State and local education revenues (thousands) 1987	Public elementary/ secondary enrollment 1986–87	Per pupil education revenues 1987	Total personal income (millions) 1986 *	Total population (thousands) 1986 *	Per capita personal income 1986 *
	1980	1987						
Alabama	19.9	22.1	$ 1,829,237	733,735	$ 2,493	$ 45,736	4,050	$ 11,293
Alaska	34.3	32.5	645,873	107,973	5,982	9,780	532	18,383
Arizona	25.1	26.2	1,917,559	534,538	3,587	44,857	3,279	13,680
Arkansas	18.4	20.4	983,446	437,438	2,248	26,135	2,371	11,023
California	21.6	21.8	16,001,481	4,377,989	3,655	453,404	27,001	16,792
Colorado	26.9	27.0	2,278,132	558,415	4,080	49,364	3,266	15,115
Connecticut	18.6	27.2	2,491,509	468,847	5,314	62,418	3,193	19,548
Delaware	27.1	27.1	396,394	94,410	4,199	9,814	633	15,504
Dist. of Columbia	20.2	24.3	394,335	85,612	4,606	11,803	623	18,945
Florida	22.0	26.1	6,135,339	1,607,320	3,817	170,994	11,694	14,622
Georgia	20.2	23.4	3,445,300	1,096,425	3,142	82,069	6,100	13,454
Hawaii	19.3	21.6	522,624	164,640	3,174	15,634	1,065	14,680
Idaho	20.6	21.3	496,322	208,391	2,382	11,192	1,002	11,170
Illinois	20.5	20.4	5,763,963	1,825,185	3,158	179,076	11,551	15,503
Indiana	18.8	26.7	3,387,264	966,780	3,504	72,217	5,503	13,123
Iowa	24.5	27.3	1,751,758	481,286	3,640	37,999	2,850	13,333
Kansas	24.7	26.5	1,600,681	416,091	3,847	35,667	2,459	14,505
Kentucky	18.4	20.2	1,463,999	642,778	2,278	41,985	3,726	11,268
Louisiana	21.2	23.9	2,138,810	795,188	2,690	50,539	4,499	11,233
Maine	22.0	26.8	730,136	211,752	3,448	15,056	1,172	12,846
Maryland	24.2	26.7	3,058,772	675,747	4,527	75,550	4,461	16,936
Massachusetts	31.0	26.5	3,901,526	833,918	4,679	102,884	5,834	17,635
Michigan	25.4	27.4	6,817,342	1,681,880	4,053	135,320	9,139	14,807
Minnesota	27.7	27.9	2,969,938	711,134	4,176	63,173	4,213	14,995
Mississippi	17.6	20.0	963,669	498,639	1,933	25,361	2,624	9,665
Missouri	21.0	23.1	2,576,645	800,606	3,218	70,618	5,064	13,945
Montana	28.2	32.2	579,150	153,327	3,777	9,583	817	11,729
Nebraska	23.5	26.0	943,891	267,139	3,533	21,683	1,598	13,569
Nevada	18.2	22.8	569,389	161,239	3,531	14,949	967	15,459
New Hampshire	14.7	23.3	625,241	163,717	3,819	16,845	1,027	16,402

Table 1:15–2 State indices of public school revenues per pupil in relation to per capita income: School years ending 1980 and 1987—Continued

State	State index		State and local education revenues (thousands) 1987	Public elementary/ secondary enrollment 1986–87	Per pupil education revenues 1987	Total personal income (millions) 1986 *	Total population (thousands) 1986 *	Per capita personal income 1986 *
	1980	1987						
New Jersey	29.1	30.3	$ 6,302,219	1,107,467	$ 5,691	$ 143,297	7,625	$ 18,793
New Mexico	25.2	27.4	885,089	281,943	3,139	16,944	1,479	11,456
New York	30.5	34.2	14,994,974	2,607,719	5,750	299,324	17,795	16,821
North Carolina	20.7	23.7	3,199,286	1,085,248	2,948	78,654	6,331	12,424
North Dakota	24.4	25.9	382,038	118,703	3,218	8,441	679	12,432
Ohio	22.1	23.9	5,944,785	1,793,508	3,315	148,929	10,748	13,856
Oklahoma	21.9	22.5	1,631,875	593,183	2,751	40,493	3,306	12,248
Oregon	25.9	29.3	1,740,468	449,307	3,874	35,778	2,702	13,241
Pennsylvania	26.2	32.8	7,840,829	1,674,161	4,683	169,857	11,894	14,281
Rhode Island	25.1	30.8	601,987	134,126	4,488	14,219	975	14,584
South Carolina	18.8	26.2	1,811,742	611,629	2,962	38,162	3,381	11,287
South Dakota	21.5	24.9	368,209	125,458	2,935	8,351	708	11,795
Tennessee	16.8	18.7	1,835,485	818,073	2,244	57,523	4,800	11,984
Texas	20.4	25.5	11,054,468	3,209,515	3,444	225,203	16,689	13,494
Utah	24.2	23.7	1,083,370	415,994	2,604	18,253	1,664	10,969
Vermont	26.1	30.0	368,274	92,112	3,998	7,207	541	13,322
Virginia	21.0	24.3	3,659,143	975,135	3,752	89,372	5,795	15,422
Washington	25.8	25.8	2,922,186	761,428	3,838	66,343	4,463	14,865
West Virginia	23.3	30.7	1,144,572	351,837	3,253	20,296	1,917	10,587
Wisconsin	25.6	29.5	3,148,923	767,819	4,101	66,590	4,783	13,922
Wyoming	25.7	45.6	586,644	100,955	5,811	6,455	507	12,732

* The figures shown are for calendar year 1986.

NOTE: Data for school year 1986–87 revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on Common Core of Data Surveys, various years); and unpublished data. National Education Association, *Estimates of School Statistics, 1986–87*, 1987, copyrighted. U.S. Department of Commerce, Bureau of Economic Analysis, *State Personal Income: 1929–82*, 1984, and *Regional Economic Information System*, August 1987.

Indicator 1:16

Table 1:16–1 Full-time-equivalent staff employed in public school systems: School years ending 1960, 1970, 1981, and 1988

School year ending	Total	Classroom teachers [1]	Other staff [2]
	Number in thousands		
1960	2,089	1,353	736
1970	3,368	2,023	1,344
1981	4,168	2,184	1,984
1988	4,312	2,279	2,034

[1] Includes a small number of teacher aides.

[2] Includes (a) instructional support staff, such as teacher aides, librarians, guidance counselors, principals, assistant principals; (b) school district administrative staff, such as superintendents and their assistants, intermediate district staff, and supervisors of instruction; and (c) other support staff such as clerical, transportation, food service, plant operation, and health staff.

NOTE: Detail may not add to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of State School Systems*, various years; and *Digest of Education Statistics, 1985–86, 1987, 1988*, and forthcoming.

Table 1:16–2 Full-time-equivalent staff employed in public school systems: School years ending 1983–1988

School year ending	All	Classroom teachers	Instructional support [1]	Administrators and administrative support [2]	Other support [3]
			Number in thousands		
1983	3,927	2,121	396	511	899
1984	3,908	2,126	387	512	883
1985	4,063	2,168	399	511	984
1986	4,161	2,207	421	516	1,016
1987 *	4,234	2,244	447	532	1,010
1988	4,312	2,279	456	539	1,039
			Percentage distribution		
1983	100.0	54.0	10.1	13.0	22.9
1984	100.0	54.4	9.9	13.1	22.6
1985	100.0	53.4	9.8	12.6	24.2
1986	100.0	53.0	10.1	12.4	24.4
1987 *	100.0	52.9	10.5	12.6	23.9
1988	100.0	52.8	10.6	12.5	24.1

* Data revised from previously published figures.

[1] Includes instructional aides, guidance counselors, and librarians.

[2] Includes school and district administrators and the associated clerical staff.

[3] Includes employees not included above, such as media personnel, bus drivers, security officers, cafeteria workers.

NOTE: Detail may not add to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1985–86, 1987, 1988*, and forthcoming (based on Common Core of Data survey); and unpublished estimates. See also "Staff in Public Elementary Schools, Secondary Schools, and School Systems, Fall, 1984," *OERI Bulletin*, January 1987; and "Staff in Public Elementary and Secondary Schools and School Systems, Fall 1983," *OERI Historical Report*, February 1987.

Table 1:17-1 Estimated average annual salary of teachers in public elementary and secondary schools: Selected school years ending 1960–1988

School year ending	Current dollars			Constant dollars (1987-88) *		
	All teachers	Elementary teachers	Secondary teachers	All teachers	Elementary teachers	Secondary teachers
1960	$ 4,995	$ 4,815	$ 5,276	$ 19,693	$ 18,983	$ 20,801
1962	5,515	5,340	5,775	21,255	20,580	22,257
1964	5,995	5,805	6,266	22,517	21,803	23,535
1966	6,485	6,279	6,761	23,544	22,796	24,546
1968	7,423	7,208	7,692	25,285	24,553	26,201
1970	8,626	8,412	8,891	26,453	25,797	27,265
1971	9,268	9,021	9,568	27,026	26,306	27,901
1972	9,705	9,424	10,031	27,321	26,530	28,238
1973	10,174	9,893	10,507	27,532	26,771	28,433
1974	10,770	10,507	11,077	26,759	26,105	27,521
1975	11,641	11,334	12,000	26,037	25,351	26,840
1976	12,600	12,280	12,937	26,319	25,651	27,023
1977	13,354	12,989	13,776	26,357	25,637	27,190
1978	14,198	13,845	14,602	26,260	25,607	27,007
1979	15,032	14,681	15,450	25,421	24,827	26,128
1980	15,970	15,569	16,459	23,830	23,232	24,560
1981	17,644	17,230	18,142	23,595	23,041	24,261
1982	19,274	18,853	19,805	23,725	23,207	24,379
1983	20,695	20,227	21,291	24,425	23,873	25,129
1984	21,921	21,460	22,557	24,949	24,424	25,673
1985	23,593	23,182	24,193	25,840	25,390	26,498
1986	25,198	24,666	25,866	26,825	26,258	27,536
1987	26,556	25,978	27,262	27,656	27,054	28,392
1988	28,044	27,423	28,895	28,044	27,423	28,895

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* Based on the Consumer Price Index, prepared by the Bureau of Labor Statistics, U.S. Department of Labor, and adjusted to a school-year basis.

NOTE: Data for some recent years have been revised from previously published figures.

SOURCE: National Education Association, *Estimates of School Statistics*, various years (latest edition 1987-88, copyright 1988 by the National Education Association, all rights reserved); and unpublished data.

Indicator 1:18

Table 1:18-1 Pupil/teacher ratios in public elementary and secondary schools: School years 1959-60 through 1987-88

School year	K-12	Elementary	Secondary
1959-60	26.0	28.7	21.5
1960-61	25.8	28.4	21.7
1961-62	25.6	28.3	21.7
1962-63	25.7	28.5	21.7
1963-64	25.5	28.4	21.5
1964-65	25.1	27.9	21.5
1965-66	24.7	27.6	20.8
1966-67	24.1	26.9	20.3
1967-68	23.7	26.3	20.3
1968-69	23.2	25.4	20.4
1969-70	22.7	24.8	20.0
1970-71	22.3	24.4	19.9
1971-72	22.3	24.9	19.3
1972-73	21.8	24.0	19.1
1973-74	21.3	23.0	19.3
1974-75	20.8	22.6	18.7
1975-76	20.4	21.7	18.8
1976-77	20.3	21.8	18.5
1977-78	19.7	21.1	18.2
1978-79	19.3	21.0	17.3
1979-80	19.1	20.6	17.2
1980-81	18.8	20.3	16.9
1981-82	18.9	20.5	16.9
1982-83	18.7	20.4	16.6
1983-84	18.5	20.4	16.2
1984-85	18.1	20.0	15.7
1985-86	17.9	19.6	15.7
1986-87	17.7	19.1	16.0
1987-88 *	17.6	19.5	15.3

* Preliminary.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of Public Elementary and Secondary Day Schools*, various years; and Common Core of Data survey, various years.

Indicator 1:19

Table 1:19-1 Projected annual demand for new hiring of classroom teachers in public elementary and secondary schools: Fall 1989-1997

Fall of year	Projected demand for new hiring of teachers		
	Total	Elementary	Secondary
1989	140,000	87,000	53,000
1990	143,000	87,000	57,000
1991	149,000	85,000	64,000
1992	161,000	87,000	74,000
1993	166,000	88,000	78,000
1994	169,000	88,000	81,000
1995	174,000	88,000	86,000
1996	174,000	89,000	84,000
1997	171,000	89,000	83,000

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1997-98*, 1988.

Indicator 1:20

Table 1:20–1 Public and private school enrollment, kindergarten through grade 12: Fall 1970–1986

Fall of year	Public school			Private school			Private school enrollment as a percentage of total enrollment		
	Total K–12	K–8	9–12	Total K–12	K–8	9–12	Total K–12	K–8	9–12
	Enrollment (in thousands)						Percent		
1970	46,193	32,648	13,545	5,655	4,485	1,170	10.9	12.1	8.0
1971	46,575	32,518	14,057	5,378	4,252	1,126	10.4	11.6	7.4
1972	45,344	31,329	14,015	5,203	4,048	1,155	10.3	11.4	7.6
1973	44,945	30,783	14,162	4,945	3,761	1,184	9.9	10.9	7.7
1974	44,957	30,682	14,275	4,867	3,695	1,172	9.8	10.7	7.6
1975	44,520	30,017	14,503	5,001	3,821	1,180	10.1	11.3	7.5
1976	44,201	29,660	14,541	4,804	3,603	1,201	9.8	10.8	7.6
1977	43,153	28,648	14,505	5,025	3,777	1,248	10.4	11.6	7.9
1978	41,976	27,745	14,231	4,978	3,734	1,244	10.6	11.9	8.0
1979	41,343	27,349	13,994	4,663	3,541	1,122	10.1	11.5	7.4
1980	—	27,088	—	—	3,537	—	—	11.5	—
1981	40,897	27,374	13,523	4,701	3,582	1,119	10.3	11.6	7.6
1982	40,131	27,127	13,004	4,702	3,584	1,118	10.5	11.7	7.9
1983	39,701	26,909	12,792	4,868	3,650	1,218	10.9	11.9	8.7
1984 *	39,794	27,073	12,721	4,306	3,249	1,057	9.8	10.7	7.7
1985	39,788	27,024	12,764	4,872	3,657	1,215	10.9	11.9	8.7
1986	40,237	27,491	12,746	4,757	3,591	1,166	10.6	11.6	8.4

—Not available.

* An unexplained drop occurred in the number and proportion of private school students in 1984, according to the Bureau of the Census. However, the 1984 data appear to be an anomaly, since the 1985 and 1986 figures for private school students are very similar to those for 1983 and are consistent with the level from 1979 through 1983.

NOTE: Detail may not add to total due to rounding.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "School Enrollment—Social and Economic Characteristics of Students: October 1984 (Advance Report)" and "October 1985 (Advance Report)," *Current Population Reports*, Series P-20, Nos. 404 and 409; and personal communication with the author.

Indicator 1:21

Table 1:21-1 Enrollment in kindergarten through grade 8 (K-8) and grades 9-12 of public elementary and secondary schools, with projections: Fall 1972-1997

Fall of year	Grades K-12 *	Grades K-8 *	Grades 9-12
		Number in thousands	
1972	45,744	31,831	13,913
1973	45,429	31,353	14,077
1974	45,053	30,921	14,132
1975	44,791	30,487	14,304
1976	44,317	30,006	14,311
1977	43,577	29,336	14,240
1978	42,550	28,328	14,223
1979	41,645	27,931	13,714
1980	40,987	27,674	13,313
1981	40,099	27,245	12,855
1982	39,652	27,156	12,496
1983	39,352	26,997	12,355
1984	39,295	26,918	12,377
1985	39,509	27,049	12,460
1986	39,837	27,404	12,434
1987	40,024	27,886	12,138
		Projected enrollment in thousands	
1988	40,280	28,439	11,841
1989	40,337	28,807	11,530
1990	40,752	29,366	11,386
1991	41,306	29,794	11,512
1992	41,879	30,178	11,701
1993	42,444	30,460	11,984
1994	43,014	30,624	12,390
1995	43,442	30,738	12,704
1996	43,775	30,772	13,003
1997	43,960	30,754	13,206

* Includes most kindergarten and some nursery school enrollment.

NOTE: Detail may not add to totals due to rounding. Some data revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1997-98*, 1988; and Common Care of Data Survey.

Indicator 1:22

Table 1:22-1 Enrollment in public elementary and secondary education, by race and ethnicity: 1976, 1984, and 1986

Race/ethnicity	1976	1984	1986	Percent change 1976-86
		Number in thousands		
Total	43,714	39,452	41,156	-5.9
White, non-Hispanic	33,229	28,106	28,957	-12.9
Total minority	10,485	11,346	12,200	16.4
Black, non-Hispanic	6,774	6,389	6,622	-2.2
Hispanic	2,807	3,599	4,064	44.7
Asian/Pacific Islander	535	994	1,158	116.4
American Indian/Alaskan Native	368	364	356	-3.3
		Percent of total enrollment		
Total	100.0	100.0	100.0	—
White, non-Hispanic	76.0	71.2	70.4	—
Total minority	24.0	28.8	29.6	—
Black, non-Hispanic	15.5	16.2	16.1	—
Hispanic	6.4	9.1	9.9	—
Asian/Pacific Islander	1.2	2.5	2.8	—
American Indian/Alaskan Native	0.8	0.9	0.9	—

—Not applicable

NOTE: Detail may not add to total due to rounding.

SOURCE: U.S. Department of Education, Office for Civil Rights, *Directory of Elementary and Secondary School Districts and Schools in Selected Districts: 1976–77*, 1984; and 1986 Elementary and Secondary School Civil Rights Survey, unpublished tabulations.

Indicator 1:23

Table 1:23-1 Elementary and secondary students served in federally supported education programs for the handicapped, by type of handicap: School years ending 1977-1988

Type of handicap	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
						Number served in thousands [1]						
All conditions	3,692	3,751	3,889	4,005	4,142	4,198	4,255	4,298	4,315	4,317	4,374	4,446
Learning disabled	796	964	1,130	1,276	1,462	1,622	1,741	1,806	1,832	1,862	1,914	1,928
Speech impaired	1,302	1,223	1,214	1,186	1,168	1,135	1,131	1,128	1,126	1,125	1,136	953
Mentally retarded	959	933	901	869	829	786	757	727	694	660	643	582
Seriously emotionally disturbed	283	288	300	329	346	339	352	361	372	375	383	373
Hard of hearing and deaf	87	85	85	80	79	75	73	72	69	66	65	56
Orthopedically handicapped	87	87	70	66	58	58	57	56	56	57	57	47
Other health impaired	141	135	105	106	98	79	50	53	68	57	52	45
Visually impaired	38	35	32	31	31	29	28	29	28	27	26	22
Multihandicapped	—	—	50	60	68	71	63	65	69	86	97	77
Deaf-blind	—	—	2	2	3	2	2	2	2	2	2	1
Preschool [2]	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	363
						Percentage distribution of children served						
All conditions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Learning disabled	21.6	25.7	29.1	31.9	35.3	38.6	40.9	42.0	42.4	43.1	43.8	43.4
Speech impaired	35.3	32.6	31.2	29.6	28.2	27.0	26.6	26.2	26.1	26.1	26.0	21.4
Mentally retarded	26.0	24.9	23.2	21.7	20.0	18.7	17.8	16.9	16.1	15.3	14.7	13.1
Seriously emotionally disturbed	7.7	7.7	7.7	8.2	8.4	8.1	8.3	8.4	8.6	8.7	8.8	8.4
Hard of hearing and deaf	2.4	2.3	2.2	2.0	1.9	1.8	1.7	1.7	1.6	1.5	1.5	1.3
Orthopedically handicapped	2.4	2.3	1.8	1.6	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.1
Other health impaired	3.8	3.6	2.7	2.6	2.4	1.9	1.2	1.2	1.6	1.3	1.2	1.0
Visually impaired	1.0	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.5
Multihandicapped	—	—	1.3	1.5	1.6	1.7	1.5	1.5	1.6	2.0	2.2	1.7
Deaf-blind	—	—	0.1	(4)	0.1	(4)	(4)	0.1	(4)	(4)	(4)	(4)
Preschool [2]	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	8.2

Indicator 1:23

Table 1:23-1 Elementary and secondary students served in federally supported education programs for the handicapped, by type of handicap: School years ending 1977-1988—Continued

Type of handicap	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
	Number served as a percent of total enrollment [5]											
All conditions	8.33	8.61	9.14	9.62	10.11	10.46	10.73	10.92	10.98	10.93	10.97	11.10
Learning disabled	1.80	2.21	2.66	3.06	3.57	4.04	4.39	4.59	4.66	4.71	4.80	4.82
Speech impaired	2.94	2.81	2.85	2.85	2.85	2.83	2.85	2.87	2.87	2.85	2.85	2.38
Mentally retarded	2.16	2.14	2.12	2.09	2.02	1.96	1.91	1.85	1.77	1.67	1.61	1.45
Seriously emotionally disturbed	0.64	0.66	0.71	0.79	0.85	0.85	0.89	0.92	0.95	0.95	0.96	0.93
Hard of hearing and deaf	0.20	0.20	0.20	0.19	0.19	0.19	0.18	0.18	0.17	0.17	0.16	0.14
Orthopedically handicapped	0.20	0.20	0.16	0.16	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.12
Other health impaired	0.32	0.31	0.25	0.25	0.24	0.20	0.13	0.13	0.17	0.14	0.13	0.11
Visually impaired	0.09	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.06
Multihandicapped	—	—	0.12	0.14	0.17	0.18	0.16	0.17	0.17	0.22	0.24	0.19
Deaf-blind	—	—	0.01	0.01	0.01	(6)	0.01	0.01	(6)	0.01	(6)	(6)
Preschool [2]	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	0.91

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[1] Includes students served under Chapter I and Education of the Handicapped Act (EHA).

[2] Includes preschool children 3-5 years old served under the EHA and 0-5 years old served under Chapter I.

[3] Beginning in 1987-88, States are no longer required to report preschool handicapped students (0-5 years) by handicapping condition. Prior to this, these students were included in the overall counts by handicapping condition.

[4] Less than 0.05.

[5] Based on enrollment in public schools, kindergarten through 12th grade, including a relatively small number of prekindergarten students.

[6] Less than 0.005.

NOTE: Counts are based on reports from the 50 States and the District of Columbia only (figures from U.S. territories are not included). Some of the increases in 1987-88 may be due in part to new legislation passed in fall 1986 which mandates public school special education services for all handicapped children ages 3 through 5 by the 1990-91 school year and provides a State grant program for handicapped children from birth to age 2. Some data have been revised from previously published figures. Because of rounding, detail may not add to totals.

SOURCE: U.S. Department of Education, Office of Special Education and Rehabilitative Services, *Annual Report to Congress on the Implementation of the Education of the Handicapped Act*, various years; National Center for Education Statistics, Common Core of Data survey; and unpublished data.

Indicator 1:24

Table 1:24–1 Public school teachers' evaluations of the change in disruptive behavior, by school characteristics: School year ending 1987

School characteristic	Total teachers (in thousands) [1]	Percent of teachers indicating that, compared to 5 years ago, student disruptive behavior is				
		Much less	Some-what less	About the same	Some-what more	Much more
All teachers	1,932	10	17	28	25	19
School level [2]						
Elementary	941	8	12	27	29	24
Middle-junior high	310	13	22	24	22	20
Senior high	647	12	23	32	22	12
School size						
Fewer than 400	465	11	16	28	25	21
400 to 999	985	10	17	28	26	19
1,000 or more	482	10	19	30	24	17
Metropolitan status						
Urban (within SMSA, central city)	405	15	16	20	23	26
Suburban (within SMSA, outside central city)	888	8	16	32	26	18
Rural (outside SMSA)	640	11	19	28	26	16

[1] Includes regular classroom teachers only; excludes librarians, special education teachers, and guidance counselors.

[2] Elementary schools—lowest grade is below 6 and the highest grade is below 9; middle-junior high schools—lowest grade is above 5 and the highest grade is below 10; senior high schools—lowest grade is above 6 and the highest grade is above 9; combined schools—lowest grade is below 6 and the highest grade is above 9. Combined schools are not listed as a separate school level because their number is so small; they are included in the totals and in analyses with other school characteristics. About 34,000 teachers taught in combined schools.

NOTE: Detail may not add to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Public School Teacher Perspectives on School Discipline," *OERI Bulletin*, October 1987.

Table 1:24–2 Percent of public school teachers indicating extent to which student behavior interferes with their teaching, by school level and metropolitan status: School year ending 1987

Extent	Total	School level *			Metropolitan status		
		Elementary	Middle-junior high	Senior high	Urban	Suburban	Rural
To a great extent	14	16	14	11	24	14	8
To a moderate extent	26	26	26	24	20	27	27
To a small extent	50	48	52	50	47	49	52
Not at all	11	9	8	15	8	11	13

* Elementary schools—lowest grade is below 6 and the highest grade is below 9; middle-junior high schools—lowest grade is above 5 and the highest grade is below 10; senior high schools—lowest grade is above 6 and the highest grade is above 9; Combined schools—lowest grade is below 6 and the highest grade is above 9. Combined schools are not listed as a separate school level because their number is so small; they are included in the totals and in analyses with other school characteristics. About 34,000 teachers taught in combined schools.

NOTE: Percents may not add to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Public School Teacher Perspectives on School Discipline," *OERI Bulletin*, October 1987.

Indicator 1:25

Table 1:25–1 Trends in the use of drugs and alcohol by high school seniors: 1975–1988

Substance used	Class of													
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Number														
Sample size	9,400	15,400	17,100	17,800	15,500	15,900	17,500	17,700	16,300	15,900	16,000	15,200	16,300	16,300
Percent who ever used														
All illegal drugs*	55.2	58.3	61.6	64.1	65.1	65.4	65.6	64.4	62.9	61.6	60.6	57.6	56.6	53.9
Cocaine	9.0	9.7	10.8	12.9	15.4	15.7	16.5	16.0	16.2	16.1	17.3	16.9	15.2	12.1
Alcohol	90.4	91.9	92.5	93.1	93.0	93.2	92.6	92.8	92.6	92.6	92.2	91.3	92.2	92.0
Percent who used substance in the last 12 months														
All illegal drugs*	45.0	48.1	51.1	53.8	54.2	53.1	52.1	49.4	47.4	45.8	46.3	44.3	41.7	38.5
Cocaine	5.6	6.0	7.2	9.0	12.0	12.3	12.4	11.5	11.4	11.6	13.1	12.7	10.3	7.9
Alcohol	84.8	85.7	87.0	87.7	88.1	87.9	87.0	86.8	87.3	86.0	85.6	84.5	85.7	85.3
Percent who used substance in the last 30 days														
All illegal drugs*	30.7	34.2	37.6	38.9	38.9	37.2	36.9	32.5	30.5	29.2	29.7	27.1	24.7	21.3
Cocaine	1.9	2.0	2.9	3.9	5.7	5.2	5.8	5.0	4.9	5.8	6.7	6.2	4.3	3.4
Alcohol	68.2	68.3	71.2	72.1	71.8	72.0	70.7	69.7	69.4	67.2	65.9	65.3	66.4	63.9

* Includes marijuana, hallucinogens, cocaine, and heroin, and other opiates, stimulants, sedatives, or tranquilizers not prescribed by a doctor. About 75 percent of these users reported smoking marijuana.

SOURCE: U.S. Department of Health and Human Services, Alcohol, Drug Abuse, and Mental Health Administration, National Institute on Drug Abuse, *Drug Use Among American High School Students, College Students, and Other Young Adults*, 1989. See also U.S. Department of Education, *Schools Without Drugs*, 1986.

Table 1:26–1 Actual and adjusted average reading proficiency, by principals' ratings of school problems for 4th, 8th, and 11th graders: 1984

Grade and average rating of school problems [1]	Average reading proficiency	
	Actual	Adjusted [2]
Grade 4		
Not a problem	229.6	223.0
Minor problem	209.5	213.5
Moderate problem	189.4	204.0
Grade 8		
Not a problem	271.9	266.1
Minor problem	257.5	259.1
Moderate problem	243.1	252.0
Grade 11		
Not a problem	306.3	296.7
Minor problem	289.4	289.1
Moderate problem	272.4	281.6

[1] School problems were rated by the principal as not a problem, minor, moderate, or serious. The problems included in this analysis include student absenteeism, lack of parental interest, lack of discipline, lack of teacher commitment/motivation, teacher absenteeism, teacher turnover, low standards for students, and vandalism.

[2] Scores adjusted for race and ethnicity, language spoken in the home, parental education, and number of reading materials in the home.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "School Climate and Reading Performance," *Survey Report*, 1988.

Table 1:26–2 Principals' ratings of school problems, by grade and control of school: 1984

Grade and control of school	Average rating of school problems *		
	Not a problem	Minor	Moderate
	Percent of schools		
4th grade	56.4	42.3	1.3
Public	53.9	44.4	1.7
Private	66.1	34.0	0
8th grade	53.3	44.4	2.3
Public	46.9	49.9	3.2
Private	67.6	32.1	0.3
11th grade	11.9	73.9	14.2
Public	9.1	73.4	17.5
Private	22.6	76.0	1.4

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* School problems were rated by the principal as not a problem, minor, moderate, or serious. The problems included in this analysis include student absenteeism, lack of parental interest, lack of discipline, lack of teacher commitment/motivation, teacher absenteeism, teacher turnover, low standards for students, and vandalism.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "School Climate and Reading Performance," *Survey Report*, 1988.

Indicator 1:27

Table 1:27–1 Percent of the public grading the public schools A or B: 1981–1988

Year	Rating of local public schools				Rating of public schools nationally			
	National totals	Public school parents	Non-public school parents	No children in school	National totals	Public school parents	Non-public school parents	No children in school
1981	36	46	25	31	20	—	—	—
1982	37	49	38	32	22	23	21	22
1983	31	43	27	28	19	19	16	19
1984	42	52	37	39	25	24	23	26
1985	43	52	33	39	27	32	23	26
1986	41	55	40	36	28	—	—	—
1987	43	56	25	39	26	30	17	26
1988	40	51	33	37	23	25	18	21

—Not available.

SOURCE: "The Annual Gallup Poll of the Public's Attitudes Toward the Public Schools," *Phi Delta Kappan*, September [various years].

Table 1:28–1 **Teachers' perceptions of "major cause" of students' difficulties in school, by wealth of district: 1987**

Cause	Total teachers	Wealth of district		
		Above average	Average for State	Below average
		Number		
Total	1,002	223	424	342
		Percent		
Children left on their own after school	51	54	52	48
Poverty in the student's home	47	42	42	54
Automatic promotion to next grade	44	36	46	48
Teachers not adapting to individual student needs	43	40	46	40
Single-parent families	42	46	43	40
Boring curriculum	34	29	36	34
Families where both parents work full time	25	25	26	25

SOURCE: *The Metropolitan Life Survey of The American Teacher 1987: Strengthening Links Between Home and School.*

Indicator 1:28

Table 1:28–2 Parents' and teachers' perceptions of several steps that would "help a lot" to improve education: 1987

Step	Parents	Teachers
	Number	
Total	2,011	1,002
	Percent	
Having the school notify parents immediately about problems involving their child	88	77
Having parents limit television until all homework is finished	79	80
Having parents spend much more time with their children in support of school and teachers	70	84
Distributing a newsletter to parents about what's happening in school	68	51
Establishing a homework hotline students can call for homework advice	64	42
Having the school guide teachers more about how to involve parents better in the future	60	41
Getting teachers and parents to meet and talk about school policies	58	52

SOURCE: *The Metropolitan Life Survey of The American Teacher 1987: Strengthening Links Between Home and School.*

Table 1:28–3 Criticisms of parents that parents and teachers think are valid: 1987

Criticism	Parents	Teachers
	Number	
Total	2,011	1,002
	Percent saying "most" or "many"	
Leave their children alone too much on their own after school	59	62
Fail to discipline their children	58	51
Fail to motivate their children so that they want to learn in school	52	53
Take too little interest in their children's education	52	48
Neglect to see that their children's homework gets done	49	50
Fail to show respect for teachers	34	23
Set too high or too strict a standard for their children to meet	30	12

SOURCE: *The Metropolitan Life Survey of The American Teacher 1987: Strengthening Links Between Home and School.*

Indicator 1:28

Table 1:28–4 Characteristics of children, by how often they are left alone after school, according to parents: 1987

Characteristic	Number of parents responding	How often the child is left alone after school		
		Never	1 or 2 days a week	Almost every day
		Percent of parents responding		
Total parents	2,011	58	17	24
Child's school level				
Elementary	898	75	13	12
Junior high	368	53	17	30
High school	503	40	21	38
Size of place				
Central city	490	58	14	26
Rest of metro area	963	59	17	23
Outside metro area	558	57	19	24
Race				
White	1,573	59	17	23
Black	211	51	17	31
Hispanic	150	62	15	21
Education of parent				
Less than high school	238	59	11	29
High school graduate	813	63	16	21
Some college	440	52	22	25
4-year college graduate	309	56	17	26
Beyond college	208	52	25	22

Table 1:28–4 Characteristics of children, by how often they are left alone after school, according to parents: 1987—Continued

Characteristic	Number of parents responding	How often the child is left alone after school: Never	1 or 2 days a week	Almost every day
		Percent of parents responding		
Status of parents				
One-parent families				
Not working	80	68	9	23
Work part time	64	48	17	35
Work full time	291	45	14	40
Two-parent families				
One not working	533	74	13	12
Both work, one part time	417	60	26	13
Both work full time	626	49	18	32
Family income				
$7,500 or less	130	59	12	28
$7,501 to $15,000	198	58	11	29
$15,001 to $25,000	397	60	15	24
$25,001 to $35,000	420	60	22	17
$35,001 to $50,000	436	57	18	24
$50,001 and over	305	52	21	26

SOURCE: *The Metropolitan Life Survey of The American Teacher 1987: Strengthening Links Between Home and School.*

Table 1:29–1 Number of course units required for high school graduation in selected subjects, by State: 1988

State	English	Social studies	Mathematics	Science	Competency test required
Alabama	4.0	3.0	2.0	1.0	Yes
Alaska	4.0	3.0	2.0	2.0	
Arizona	4.0	2.5	2.0	2.0	Yes
Arkansas *	4.0	3.0	2.0	2.0	
California	3.0	3.0	2.0	2.0	Yes
Colorado	0.0	0.0	0.0	0.0	
Connecticut	4.0	3.0	3.0	2.0	
Delaware	4.0	3.0	2.0	2.0	
District of Columbia	4.0	2.0	2.0	2.0	Yes
Florida	4.0	3.0	3.0	3.0	Yes
Georgia	4.0	3.0	2.0	2.0	Yes
Hawaii	4.0	4.0	2.0	2.0	Yes
Idaho	4.0	2.0	2.0	2.0	
Illinois	3.0	2.0[1]	2.0	1.0	
Indiana	3.0	2.0	1.0	1.0	
Iowa	0.0	0.0	0.0	0.0	
Kansas	4.0	3.0	2.0	2.0	
Kentucky	4.0	2.0	3.0	2.0	
Louisiana	4.0	3.0	3.0	3.0	Yes
Maine	4.0	1.0	0.0	0.0	
Maryland	4.0	3.0	3.0	2.0	Yes
Massachusetts	0.0	1.0	0.0	0.0	
Michigan	0.0	0.5	0.0	0.0	
Minnesota	3.0	2.0	0.0	0.0	
Mississippi	3.0	2.5	1.0	1.0	Yes
Missouri	3.0	2.0	2.0	2.0	
Montana	4.0	2.0	2.0	1.0	
Nebraska	0.0	0.0	0.0	0.0	Yes
Nevada	3.0	2.0	2.0	1.0	
New Hampshire	4.0	2.0	1.0	1.0	

Table 1:29–1 Number of course units required for high school graduation in selected subjects, by State: 1988—Continued

State	English	Social studies	Mathematics	Science	Competency test required
New Jersey	4.0	2.0	2.0	1.0	
New Mexico	4.0	2.0	2.0	2.0	Yes
New York	4.0	3.0	2.0	2.0	Yes
North Carolina	4.0	2.0	2.0	2.0	Yes
North Dakota	4.0	3.0	2.0	2.0	
Ohio	3.0	2.0	2.0	1.0	
Oklahoma	4.0	2.0	2.0	2.0	
Oregon	3.0	3.5	2.0	2.0	Yes
Pennsylvania	4.0	3.0	3.0	3.0	
Rhode Island	4.0	2.0	2.0	2.0	
South Carolina	4.0	3.0	3.0	2.0	
South Dakota	4.0	3.0	2.0	2.0	
Tennessee	4.0	1.5	2.0	2.0	Yes
Texas	4.0	3.0	3.0	2.0	Yes
Utah	3.0	3.0	2.0	2.0	
Vermont *	4.0	3.0	2.0	2.0	Yes
Virginia *	4.0	3.0	2.0	2.0	Yes
Washington	2.0	1.7	1.0	0.7	
West Virginia	4.0	3.0	2.0	2.0	
Wisconsin	4.0	3.0	2.0	2.0	
Wyoming	0.0	0.0	0.0	0.0	

* Requires a total of five units in mathematics and science with at least 2 units in each.

SOURCE: Council of Chief State School Officers, 1988 Policies and Practices Questionnaire.

Indicator 1:30

Table 1:30-1 Teacher preparation assessment requirements, by State: 1988

State	Admission to teacher education	Exit from teacher education	Initial or provisional certification	Regular or permanent certification	Recertification or maintenance of certification
Alabama	BS	(1)	No test	CK	No test
Alaska [2]	No test	No test	No test	No test	No test
Arizona	BS, PS	No test	BS, PS	No test	No test
Arkansas	BS	IO	PS, CK	PS, CK	No test
California	BS	No test	[3] BS, CK	[3] BS, CK	No test
Colorado	BS	No test	[4] BS	No test	No test
Connecticut	BS	No test	BS, CK	BS, CK, IO	No test
Delaware	No test	No test	BS	BS	No test
District of Columbia	(2)	(2)	BS, CK	BS, CK	No test
Florida	[5] No test	BS, PS, IO	BS, PS	BS, PS, CK, IO	[6] CK
Georgia	No test	No test	CK	CK, IO	CK
Hawaii	BS	IO	BS, PS, CK, IO	IO	IO
Idaho	No test	No test	[7] BS, PS, CS	No test	No test
Illinois	[8] No test	No test	BS, CK	BS, CK	No test
Indiana	No test	No test	BS, PS, CK	No test	No test
Iowa	No test	No test	No test	No test	IO
Kansas	BS	No test	No test	BS, PS, IO	No test
Kentucky	BS	PS, CK, IO	PS, CK, IO	PS, CK, IO	No test
Louisiana	CK	IO	No test	BS, PS, CK	No test
Maine	No test	No test	BS, PS, IO	No test	No test
Maryland	No test	No test	BS, PS, CK	No test	No test
Massachusetts	No test	IO	No test	IO	No test
Michigan	[9] BS	[9] CK	[9] CK	No test	No test
Minnesota	BS	IO	No test	No test	No test
Mississippi	BS	IO	BS, PS, CK	IO	No test
Missouri	BS	[10] PS, CK, IO	IO	IO	IO
Montana	No test	No test	BS, PS	BS, PS	No test
Nebraska	BS	No test	No test	BS	No test
Nevada	BS	PS, CK	PS, CK	PS, CK	CK
New Hampshire	BS	No test	No test	No test	IO
New Jersey	BS, IO	IO	CK, IO	CK	No test
New Mexico	BS	IO	BS, PS, CK	BS, PS, CK, IO	IO
New York	No test	No test	BS, PS	BS, PS	BS, PS
North Carolina	BS	PS, CK	PS, CK, IO	IO	IO
North Dakota	BS	PS, CK	No test	No test	No test

Table 1:30–1 Teacher preparation assessment requirements, by State: 1988— Continued

State	Admission to teacher education	Exit from teacher education	Initial or provisional certification	Regular or permanent certification	Recertification or maintenance of certification
Ohio [11]	BS, IO	BS, PS, CK, IO	BS, PS, CK	No test	No test
Oklahoma	BS, PS	No test	CK	CK	No test
Oregon	BS, CK	No test	BS	IO	No test
Pennsylvania [11]	No test	No test	BS, PS, CK	No test	No test
Rhode Island	No test	IO	BS, PS, IO	No test	No test
South Carolina	BS	PS, CK, IO	PS, CK	PS, CK	No test
South Dakota	BS	No test	No test	No test	No test
Tennessee	PS	No test	PS, CK	No test	No test
Texas	BS	IO	PS, CK	IO	IO
Utah	No test	No test	IO	IO	No test
Vermont	No test	No test	No test	No test	No test
Virginia	BS, PS, CK, IO	No test	BS, PS, CK	IO	No test
Washington	BS	[12] No test	[12] No test	No test	No test
West Virginia	BS	CK, IO	CK, IO	No test	No test
Wisconsin	[13] BS	[14] CK	[14] BS, CK	[14] BS, CK	No test
Wyoming	BS	No test	No test	No test	No test

Key to types of tests required:
BS = Basic skills;
PS = Professional skills;
CK = Content knowledge;
IO = In-class observation.

[1] Requirements or tests are under development.

[2] No State policy, some tests administered by universities.

[3] May be waived by the State.

[4] Basic skills test required for persons holding out-of-State certificates.

[5] Provided student's score is in the 40th or higher percentile on the ACT.

[6] Optional in lieu of other requirements.

[7] Also required for reinstatement of expired license.

[8] Institutions must test for reading, language arts, and mathematics; no specific test is required.

[9] Required in 1990.

[10] Required beginning in 1992.

[11] Tests for admission to and exit from teacher education programs are established by the college or university.

[12] Professional skills test planned.

[13] Required fall of 1989.

[14] Required spring of 1991.

SOURCE: Council of Chief State School Officers, 1988 Policies and Practices Questionnaire.

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